

CORNELL UNIVERSITY OFFICIAL PUBLICATION

FEBRUARY 24, 1952

Summer Session

ANNOUNCEMENT FOR SESSIONS

JULY 7 - AUGUST 16, 1952



SUMMER SESSION OFFICE

The Summer Session office is in Room 245, Goldwin Smith Hall; the telephone of the office and the Director is 4-3211, Extension 2924. The office will be open from 8 A.M. to 12 M. and 2 P.M. to 4 P.M. except Saturday during the six-week Summer Session; on Saturday the office will close at 12 noon. Miss Anita Rynone is Secretary; Mrs. Helen Simmons, Information Assistant.

ADMINISTRATIVE BOARD

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Dean of the Graduate School

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CORNELL UNIVERSITY OFFICIAL PUBLICATION

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Calendar

REGULAR SIX-WEEK SESSION

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| July 7, <i>Monday</i> | Registration for the regular six-week Summer Session, 9:00 A.M. to 12:00 noon and 1:30 P.M. to 3:30 P.M. in Barton Hall. Fees are due for payment at the Treasurer's office, 260 Day Hall. |
| July 8, <i>Tuesday</i> | Instruction begins at the time and place announced for each course. Registration is continued at the Summer Session office. |
| July 14, <i>Monday</i> | Last day for payment of fees at the Treasurer's office, which closes at 4:00 P.M. |
| August 15, <i>Friday</i> | Final examinations begin; schedule on page 00. |
| August 16, <i>Saturday</i> | Summer Session ends, 4:00 P.M. |

SPECIAL PROGRAMS

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|-----------------------------------|---|
| June 9 to July 19 | Summer Field School in Geology. |
| June 30 to August 16 | School of Hotel Administration Unit Courses. |
| July 7 to July 26 | Extension Service Summer School. |
| July 7-26 or
July 28-August 16 | Home Preservation of Food. Unit Course. |
| July 31 to August 9 | Field Seminar in Understanding the Community. |
| August 11 to August 16 | Summer Work Conference: School of Education. |
| August 18 to August 29 | Post Session in Industrial and Labor Relations. |

*Be sure to bring this Announcement with you for use on
registration day and throughout the Summer Session.*

General Information

THE Administrative Board of the Summer Session offers academic instruction for both graduates and undergraduates by members of the faculties of the Graduate School, of the Colleges of Arts and Sciences, Engineering, Agriculture, and Home Economics, and of the Schools of Education, Industrial and Labor Relations, and Hotel Administration.

This unification of the curricula and faculties of the several schools and colleges makes possible the adaptation of academic work to the special needs of summer students. Undergraduate courses are equivalent to required and elective collegiate courses leading to the baccalaureate. Advanced courses, seminars, and informal study, treating topics of concern to students with special interests, are designed with particular regard for what can satisfactorily be treated in a short term and in the summertime. The needs of teachers are met not only in the workshops, seminars, and professional courses in Education, but also in departmental courses. A number of unit programs and special courses are offered for professional workers other than teachers.

All necessary facilities of the University are available to students registered in the Summer Session: libraries, classrooms, and laboratories; residence halls, dining rooms, and cafeterias; health services and medical care; counseling services; student union, chapel, playing fields, and recreational areas.

ADMISSION

The Summer Session's purpose is to place the facilities of the University at the disposal of persons who can use them to good advantage and for serious purposes during the summer period. Admission will not be granted to persons who are inadequately trained for the work they propose, or whose records in Cornell University or elsewhere are unsatisfactory. Nor will admission be granted to persons whose purposes seem inadequate or inappropriate or better served by other work at other institutions.

Admission of undergraduate or graduate students to the Summer Session establishes no priority with respect to admission to the regular terms. Students seeking admission to an undergraduate college in the fall should apply to the Director of Admissions, 233 Day Hall.

Students are eligible for admission to the Summer Session in three categories as follows:

UNDERGRADUATES....An undergraduate candidate for the Bachelor's degree, at Cornell University or elsewhere, *is required to preregister for a program of courses totaling between five and seven credit hours, all of which are approved by the dean, registrar, or other appropriate officer of his college for credit toward graduation.* This preregistration, to be made by completing the undergraduate application form, is final and can be changed only by filing a new application. The special application form for undergraduates will be mailed by the Director on request.

Sophomore standing or above is required of undergraduates regularly attending institutions other than Cornell University. By definition, a student has achieved sophomore standing if he has completed one-fourth of the credit requirements for the Bachelor's degree before June 15, 1952.

June 21, 1952, is the closing date for admission of undergraduates.

GRADUATES....Any graduate of a recognized four-year college or normal school is eligible for admission to the Summer Session upon receipt by the Director of the Summer Session of a graduate application form. Graduate students are requested to preregister for a program of courses totaling from four to seven credit hours. This preregistration is made by completing the graduate application form and returning it to the Summer Session office by June 21, 1952. A graduate or special student may register as late as July 7 but is advised to select courses by June 21 in order to ensure a place in classes. A course program may be changed on registration day, July 7, in Barton Hall, if the student finds classes to which he can be admitted. Admission to the Summer Session in this category does not constitute admission to the Graduate School of Cornell University as a candidate for an advanced degree. See page 00 for information regarding admission to the Graduate School.

SPECIAL STUDENTS....Applicants over twenty-four years of age who are not candidates for an academic degree will be admitted to the Summer Session for courses which will help their vocational and personal development.

APPLICATION FOR ADMISSION....Application for admission to the Summer Session of 1952 must be made on a special form mailed by the Director of the Summer Session on request. In most cases the information called for on this form will be sufficient.

Registration coupons, necessary for registration in the Summer Session, will be mailed to the applicant after favorable action.

PROGRAM OF STUDY

The usual Summer Session program is from four to seven credit hours. Five credit hours constitutes a full load for undergraduate students and four credit hours a full load for graduate and special students in the

six-week session. Students are advised against registering for more than seven hours.

Undergraduates are required to register for a program of between five and seven hours of credit. The permission of the Director of the Summer Session is required for programs totaling less than this, and the written permission of the student's dean is necessary for programs as heavy as eight credit hours, the maximum load. Permission for an eight-hour program is usually granted only to those students with a high academic average.

Graduates and special students not enrolled in the Graduate School of Cornell University are required to register for at least four hours of credit and may not register for more than seven hours of credit except by permission of the Director.

Graduate students matriculated in the Graduate School of Cornell University may, upon the recommendation of their respective committee chairmen, register for as many as eight hours of credit.

Special permission for registration in certain restricted courses, as noted in the course descriptions (pages 22-67), should be obtained, before filing the application blank, by writing to the instructor named.

ACADEMIC CREDIT

All courses offered in the Summer Session are assigned appropriate hours of credit. Registration for a program of courses implies registration *for credit*. A student wishing to attend regularly a class for which he is not registered should obtain an auditor's permit (page 8).

CREDIT... There is, in general, no sharp distinction between undergraduate and graduate courses. In this Announcement each course is marked immediately after the title in one of three ways:

(U)... These courses are intended primarily for undergraduates. Students registered in the Graduate School of Cornell University will not receive credit for these courses toward an advanced degree unless such credit is specifically recommended by the committees in charge of their work.

(U,G)... These courses are offered both at the graduate and the undergraduate level. Graduate students who are candidates for advanced degrees or who wish certification for work done at the graduate level must indicate at the time of registration their intention to complete the course at the graduate level and must be prepared to do any additional work that may be required. Such students registered in "U,G" courses should consult with their instructors early in the session to see that the level is properly recorded.

(G)... These courses are intended primarily for students who are candi-

dates for advanced degrees, for teachers, and for others who wish certification to accrediting agencies for work done at the graduate level. Undergraduates with adequate preparation may register for these courses only after receiving permission from the instructors in charge.

No student may receive credit for more than eight semester hours of work done in a single six-week summer session.

CREDIT TOWARD DEGREES AT CORNELL UNIVERSITY. . . A student matriculated in an undergraduate school or college of Cornell University will be admitted to the Summer Session only after the appropriate officer from the following list has approved and signed his application for admission.

College of Agriculture: Professor J. P. Hertel.

College of Architecture: Dean T. W. Mackesey or Professor J. A. Hartell.

College of Arts and Sciences: Associate Dean M. L. Hulse.

College of Home Economics: The student's counselor.

College of Engineering: *Chemical*, Professor C. C. Winding; *Civil*, Professor N. A. Christensen; *Electrical*, Professor H. G. Smith; *Mechanical*, Professor G. R. Hanselman.

School of Hotel Administration: Professor H. B. Meek.

School of Industrial and Labor Relations: Professor C. A. Hanson.

This approval will indicate that the school or college will accept credit in the stipulated courses as credit toward a degree.

CREDIT IN INSTITUTIONS OTHER THAN CORNELL UNIVERSITY. . . An undergraduate enrolled in another institution, before admission to the Summer Session, will submit as part of his application a program of courses approved for credit by an officer of the institution in which he is a candidate for a degree. When admitted, the student will be preregistered for those approved courses. At the end of the Session an official transcript of the Summer Session record will be sent to the institution. The transcript will show what courses have been taken, the amount of credit in semester hours, and the grades received.

GRADES. . . All grades are reported in a numerical scale from 0 to 100. If a student *for medical or other important reasons* must be absent from the last class meeting and cannot make up the work before the last day of instruction, he may request the instructor to report his grade as *Absent*, together with a conditional numerical grade which may be used as the final recorded mark if the course work is not completed by January 1, 1953. It is the student's responsibility to make such specific arrangements with his instructors when necessary.

No other grades, for instance, *Incomplete*, are given in the Summer Session.

The colleges of Cornell University regard the grade of 60 as the lowest passing grade.

REGISTRATION

Registration for the six weeks' Summer Session will take place on Monday, July 7, in Barton Hall. Each student's certificate of admission, which is included with the registration coupons, will give the hour of the day at which he will be admitted. Directions for registration procedure will be issued at the entrance. Students who for any reason have not received a certificate of admission will report to the Admissions table at Barton Hall after 9 A.M.

Graduate students who are candidates for degrees at institutions other than Cornell University, and who are planning to obtain credit toward these degrees by their Summer Session work, do *not* register in the Cornell Graduate School, but only in the six weeks' Summer Session. Before so registering they should arrange for the accrediting of this work by the institutions from which they plan to take their degrees. Other students who hold Bachelors' degrees but who are not candidates for advanced degrees will also register only in the six weeks' Summer Session.

Registration in the University is required for admission to any of the exercises of the Summer Session.

UNIT COURSES.... In the curriculum following, certain courses are announced that are less than six weeks in duration. Usually such courses are designed to occupy the full time of the student. It is therefore impossible for students registered in the six weeks' session to register for a unit course, or for students in a unit course to enroll in other courses. The special times and places for registration in unit courses are announced in the course descriptions.

CHANGES OF REGISTRATION.... All changes of registration after Monday, July 7, must be made by appearing at the Summer Session office, 245 Goldwin Smith Hall, before 12:00 noon on July 12. When a change of registration involves enrollment in another course, the permission of the instructor of the new course is necessary.

An undergraduate whose program requires change on registration day should report to the Director and must have obtained approval of the change from an officer of the institution in which he is a degree candidate.

Changes in registration include cancellation of a course, change from one course to another, change in graduate or undergraduate level, addition of a course to a program, or change from credit to auditor's status in a course.

Changes in registration cannot be effected by notifying the instructor of a given course. Students must appear at the Summer Session office before 12:00 noon on July 12 in order to make program changes.

AUDITORS. . . Admission to classrooms during the Summer Session is restricted to students registered for the Session. A student thus duly registered may occasionally visit any class; but if he wishes to attend regularly classes for which he is not registered, he must secure an auditor's permit. Such permits will be granted whenever the student can show a serious purpose in such attendance, if his program is light enough to allow the additional appointment. *Auditors do not take part in the work of the courses which they visit, and no record of such attendance is made.* Auditors' permits are not issued on registration day; they may be secured on Thursday, July 10, and at any time thereafter at the Summer Session office.

WITHDRAWAL FROM THE SUMMER SESSION. . . See page 9 for information concerning withdrawal.

FEES

All fees are due and payable at the Treasurer's office in Day Hall on registration day, July 7. The last day for payment of fees without penalty is Monday, July 14. The Treasurer's office closes at 4:00 P.M.

TUITION. . . Undergraduate candidates for the Bachelor's degree at Cornell or elsewhere pay a tuition fee of \$97 for the six weeks' Summer Session. Graduate and special students pay \$77.

An undergraduate candidate for the Bachelor's degree in the Colleges of Agriculture or Home Economics, or in the School of Industrial and Labor Relations, at Cornell, who is a resident of New York State and who is approved by the appropriate officer of his college, will be awarded a partial tuition scholarship of \$25, reducing the tuition charge in this case to \$72.

Tuition for unit courses is charged at the rate of \$15 per week, which charge includes a pro rata share of the student union fee and administration fee. (Health and hospital services are not available to unit course registrants.)

FEES AND DEPOSITS. . . Six-week Summer Session students will pay, in addition to tuition, a general fee of \$13, which entitles them to health and infirmary services (see page 14), administration services, and student union membership. Fees for laboratories, field trips, and incidental expenses are charged in certain courses. Special fees are charged for individual instruction in music, golf, tennis, and other subjects.

REGISTRATION DEPOSIT. . . A student who is registering as a candidate for a degree for the first time in the Graduate School or in one of the other schools or colleges of Cornell University must pay a registration deposit of \$30, unless he has already paid this deposit as an undergraduate at Cornell University. A student registered only in the six weeks' Summer Session *does not* pay this deposit.

A matriculation fee of \$18 is charged against this \$30 deposit upon registration, and the balance becomes a guaranty fund refunded upon graduation or permanent withdrawal. For further information about this deposit, the *General Information* booklet, which may be obtained upon request from Cornell University Official Publication, Day Hall, should be consulted.

WITHDRAWAL FROM THE SUMMER SESSION. . . A student may arrange for withdrawal at any time by canceling his registration at the *Summer Session office*, 245 Goldwin Smith Hall. In such cases, the Treasurer may refund a part of the tuition and general fee, or cancel a part of the obligation that the student has incurred for tuition, provided the reason for withdrawal is stated in writing and is satisfactory to the Treasurer and the Registrar. In such cases the student is required to pay 20 per cent of the term's tuition and general fee for each week or fraction of a week between the first registration day and the date of his certificate of withdrawal, unless the withdrawal is made before noon on Friday, July 11. No refund of the health services fee will be made for a student who has used the University's infirmary or hospital services.

OTHER REGULATIONS CONCERNING FEES. . . Any student, graduate or undergraduate, except as hereinafter provided, who fails to pay his tuition, fees, and other indebtedness, or, if entitled to free tuition fails to claim the same at the Treasurer's office and pay his fees within the time prescribed by the University, is thereby dropped from the University. When in his judgment the circumstances in a particular case so warrant, the Treasurer may allow an extension of time to complete payments. For such an extension, the student will be assessed a fee of \$2. A reinstatement fee of \$5 will be assessed in the case of any student who is permitted to continue or return to classes after being dropped from the University for default in payments. For reasons satisfactory to the Treasurer and the Registrar, which must be presented in writing, the above assessment may be waived in any individual case.

Any tuition fee or other fee may be changed by the Trustees to take effect at any time without previous notice.

CASHING OF CHECKS. . . The Treasurer of the University accepts checks in settlement of charges payable at his office, but a rule of the Board of Trustees forbids him to cash any credit instrument, even to the extent of accepting a check or draft in amount greater than the sum due and returning the excess in cash. Students are therefore advised to open an account in an Ithaca bank as soon as they arrive in town, or else to provide themselves with travelers' checks, drafts on New York City banks, money orders, or other forms of credit instrument such as a bank will cash in the ordinary course of business.

VETERANS

Veterans who plan to study under Veterans Administration educational benefits during the Summer Session should observe the following instructions.

PUBLIC LAW 346 VETERANS. . . Veterans enrolling for the first time under educational benefits, or veterans whose last period of training was not at Cornell, must present a Certificate of Eligibility for the course of study they plan to pursue. Application for the certificate should be made to the local Veterans Administration Regional Office, or, in the case of veterans who have had previous training, to the office where their records are located.

Veterans enrolled and using benefits at Cornell during the spring term, 1952, may use their benefits during the Summer Session, providing there is no change of course or objective, by completing enrollment forms in the Treasurer's office. Veterans making a change of course or objective must apply to the Veterans Administration for approval of the change prior to the close of the spring term, 1952. Application forms are available at the Treasurer's office.

Teachers who were enrolled under benefits at Cornell during the Summer Session, 1951, who have not been in training since that time must bring with them a statement in duplicate from their school authorities to the effect that they were teaching during the school year of 1951-52.

A veteran who fails to present the required papers or complete the necessary forms will be expected to pay tuition and fees, subject to such reimbursement as may eventually become due.

PUBLIC LAW 16 VETERANS. . . Veterans under this law must arrange for approval by the Veterans Administration prior to registration in the Summer Session.

All questions concerning eligibility for Veterans Administration educational benefits should be directed to the nearest Veterans Administration Office.

THE GRADUATE SCHOOL

The Graduate School is an administrative unit entirely separate from the administration of the Summer Session. Only candidates for advanced degrees at Cornell University are registered in the Graduate School in the summertime. Students who take course work at the graduate level in the Summer Session but who are not candidates for an advanced degree at Cornell University have no connection with the Graduate School.

CREDIT FOR ADVANCED DEGREES. . . Summer Session credits may be used for fulfillment of requirements for the following advanced degrees, under regulations of the Faculty of the Graduate School:

Master of Arts (M.A.)
Master of Science (M.S.)
Master of Science in Agriculture (M.S. in Agr.)
Master of Science in Education (M.S. in Ed.)
Master of Education (M.Ed.)
Master of Science in Industrial and Labor Relations (M.S. in I.L.R.)
Master of Chemical Engineering (M.Chem.E.)
Master of Metallurgical Engineering (M.Met.E.)
Master of Electrical Engineering (M.E.E.)
Master of Civil Engineering (M.C.E.)
Doctor of Education (Ed.D.)
Doctor of Philosophy (Ph.D.)

In the main, not more than one Summer Session, consisting of a full program of courses at graduate level, taken before a student has been admitted to candidacy for an advanced degree, may be transferred to the Graduate School in fulfillment of degree requirements.

After admission to the Graduate School a candidate may, on recommendation of his graduate committee, complete one year of the residence requirements for the degree by Summer Session study, including the one Summer Session allowed before admission to candidacy. Five Summer Sessions equal one year or two semesters: three Summer Sessions equal the first semester and two Summer Sessions equal the second semester. A candidate who is in residence only during Summer Sessions is expected to continue his studies during the year under the direction of the chairman of his committee.

ADMISSION. . . Students intending to become candidates for an advanced degree at Cornell should write to the Dean of the Graduate School, 125 Day Hall, for application blanks and for the *Announcement of the Graduate School*, which gives all regulations governing advanced degrees, including regulations governing admission. Applications received before May 1 will be acted upon in time for the accepted candidate to register in the Graduate School on registration day, July 7. Those who apply after May 1 probably will not be admitted to the Graduate School for the ensuing summer but may take graduate courses in the Summer Session; this work may be transferred to candidacy later, providing it does not exceed the one Summer Session stipulated above and is approved by the candidate's special committee.

REGISTRATION DEPOSIT. . . On admission to the Graduate School, the applicant is required to pay the sum of \$30 within twenty days of notification of admission. Eighteen dollars will be used to pay the matriculation fee; the other twelve dollars will be held on deposit in the Treasurer's office until official withdrawal or the granting of the degree, as a guaranty against outstanding bills.

REGISTRATION...Students matriculated in the Graduate School must register in both the Summer Session and the Graduate School. Full information and proper forms for registering in the Graduate School are to be obtained at the Graduate School table in Barton Hall on registration day. The registration must be completed within one week of registration day. To register, each candidate must file a Statement of Courses blank, properly approved by his committee chairman. Each *new* candidate must file a Nomination of Committee blank.

Note: Such registration is regarded in the same fashion as registration for a regular semester and affects the deadlines for fulfillment of requirements. For instance, a new candidate must complete his first language requirement within thirty days of Summer Session registration day.

Candidates registered in the Summer Session who were not registered in the preceding spring term but who expect to register in a succeeding regular term for continuation of their candidacy must arrange with the Dean of the Graduate School for permission to register in the regular term.

COMPLETION OF REQUIREMENTS...Candidates for advanced degrees who expect to complete requirements and to take their final examinations at the end of the Summer Session should call at the office of the Graduate School not later than the third week of the Session for the necessary instructions and blanks.

CANDIDATES IN THE SCHOOL OF EDUCATION...Students interested in the degrees of Master of Science in Education (M.S. in Ed.) and Master of Education (M.Ed.) should consult the *Announcement of the School of Education*, which will be sent upon request to Official Publication, Day Hall, Cornell University. The Faculty of the School of Education, functioning as a division of the Faculty of the Graduate School, has special jurisdiction over those two degrees.

SPECIAL REGULATIONS

CONDUCT AND SCHOLARSHIP...The Summer Session is administered under the general regulations governing conduct and scholarship which apply to all sessions of the University. Students are expected to familiarize themselves with dormitory and other rules and to abide by them. A statement of the University rule governing student conduct follows:

"A student is expected to show both within and without the University unflinching respect for order, morality, personal honor, and the rights of others. The authority to administer this rule and to impose penalties for its violation is vested in the University Committee on Student Conduct.

The rule is construed as applicable at all times, in all places, to all students of the University."

AUTOMOBILE REGULATIONS . . . Because of local traffic and parking conditions it is necessary to require registration of both motor vehicles and their drivers during the Summer Session as well as during the academic year. Each student who maintains or operates a motor-driven vehicle in or about Ithaca during the Summer Session must do the following: (1) register with the Safety Division Office, Day Hall, at the time of Summer Session registration, by paying a fee of \$1 and displaying, as directed, a registration sticker; (2) if under twenty-one years of age, have written consent of his parent or guardian; (3) produce evidence that he may drive in New York State and that the vehicle may be driven there; (4) produce evidence that the vehicle is insured at the standard minima of \$10,000-\$20,000-\$5,000. Motorcycles must be registered but may not be used on the campus during class hours. Trailers as family living units are not allowed on any University property. Campus parking during class hours may be restricted to certain areas.

LIBRARIES

The University libraries comprise the general library of the University and the libraries of the following colleges and schools: The Library of the College of Agriculture, the Library of the Agricultural Experiment Station at Geneva, the Architecture Library, the Business and Public Administration Library, the Engineering Library, the Library of the College of Home Economics, the Library of the School of Industrial and Labor Relations, the Law Library, and the Veterinary Library.

In addition there are the following special departmental libraries and laboratory collections: Agricultural Economics, Agronomy, Animal Husbandry, Barnes Hall, Botany, Browsing, Chemical Engineering, Chemistry, Conservation, Dairy Industry, Entomology, Floriculture, Geology, Goldwin Smith, Hotel, Mathematics, Military, Music, Nutrition, Physics, Plant Breeding, Plant Pathology, Poultry, Regional History, and Zoology.

The usual hours of opening for the libraries during the Summer Session are 7:50 A.M. to 10 P.M. on all weekdays except Saturday, when the libraries close at 5 P.M. Certain exceptions, especially in the departmental libraries and laboratory collections, may prevail.

The general collection of reference books and documents, the chief bibliographical publications, and the principal series of academy and learned society publications are located in the University Library. Specialized reference materials will be found in the various college and departmental libraries. The Reference Department of the University Library and the librarians of the college, school, and departmental libraries

are prepared to assist students in the effective use of the libraries and in the location of research materials.

The total library resources on the Ithaca campus exceed 1,400,000 volumes. The number of periodicals, transactions, and other serials currently received is over 5,000.

In the course of their development the libraries have received and have built up special collections, some of the most significant being: Architecture, American History, Slavery, Reformation, English and French Revolutions, American Civil War, History of Superstition, Spinoza, Dante, Petrarch, Rhaeto-Romanic, Egyptology and Assyriology, China, Dramatic Literature, Freemasonry, Legal Trials, Entomology, Botany, Zoology, History of Science, Icelandic, and Regional History.

Cards of admission to the stacks and to the White Historical Library are issued to graduate students for the purpose of consultation and research. A limited number of stalls and study spaces are available to graduate students upon application. The privilege of borrowing books for home use is granted to all students who comply with the library regulations.

HEALTH SERVICES

The Student Medical Clinic at 5 Central Avenue will be available for all students registered in the regular six weeks' Summer Session.

Clinic Hours

Monday through Friday	9-12 A.M., 2-4:30 P.M.
Saturday	9-12 A.M.
Sunday	10-11 A.M.

A nurse will be in attendance from 12 noon until 2 P.M. Monday through Friday. Those desiring to consult a physician after 5 P.M. weekdays, on Saturday afternoons, or on Sundays for an illness or accident of emergency nature may go directly to the institution providing hospital services. The night service is not intended for the use of those who could visit the Clinic during the day.

Emergency room call service will be available at these charges: \$3 for night visits and \$2 for day visits. Requests for room visits will be cleared through the Student Medical Clinic, Ithaca 4-3211, Extension 4518, during the day, and through the Infirmary switchboard, Ithaca 2747, after 5 P.M. on weekdays, Saturday afternoons, and Sundays. Patients requiring more than one emergency visit for any one illness will not be treated in their rooms but will be requested to go to the institution providing hospital services.

Hospital care will be provided for students either at the Cornell In-

firmly or the Tompkins County Memorial Hospital. The specific place will be made known to students on the opening day of the Summer Session. Two days' bed, nursing, and ordinary medical care will be granted without extra charge. Emergency surgical care will also be provided. Emergency surgical care is defined as surgical procedures which, in the opinion of the Medical Director, are necessary for the immediate welfare of the patient. Rates in a hospital for registered students beyond the two-day exemption period will be \$10.00 a day.

If a student, while in the hospital, wishes to avail himself of a private physician from the visiting staff, he is at liberty to do so. A student may also receive medical care from private physicians in the city of Ithaca rather than consult the Clinic. In either case, the cost of this service is not included in the health fee.

LIVING ACCOMMODATIONS

Rooms are available to both graduate and undergraduate men and women in University-operated housing units, as well as off campus. A leaflet giving detailed information on both types of housing, *Residential Halls for Men and Women*, may be secured by writing to the Department of Residential Halls, Day Hall, Cornell University, Ithaca, New York.

UNDERGRADUATE WOMEN. . . All undergraduate women registered in the 1952 Summer Session are required to live in Residential Halls for Women and to take their meals there. Unit V of Clara Dickson Hall will be in use for undergraduate housing, and there will be a uniform charge of \$151.80 for board, room, and an allowance of personal laundry for the six weeks' period.

GRADUATE WOMEN. . . Graduate women under twenty-one are required to live in Residential Halls for Women. Graduate women over twenty-one may make application for rooms in Residential Halls or may live in off-campus houses.

Risley Hall will be reserved for graduate women's housing. The rates will range from \$47.40 to \$56.40 for the six weeks' session, depending upon the desirability and location of the room, and will include room and an allowance of personal laundry only.

Unit VI of Clara Dickson Hall will be available for graduate women who are interested in arranging for board. A uniform rate of \$142.80 for six weeks will include room, twenty-one meals a week, and an allowance of personal laundry.

GRADUATE AND UNDERGRADUATE MEN. . . Single and double rooms in the Baker group of Residential Halls will be available to both

groups of men. Such assignments are made in order of date of application. The rates range from \$28.50 to \$45.00 for the six weeks' session, depending upon the desirability and location of the accommodation, and will include room only.

SOCIAL REGULATIONS FOR WOMEN...A Head Resident, appointed by the Office of the Dean of Women, is located in a first-floor apartment of each unit of Clara Dickson Hall and of Risley Hall. Each Head Resident is responsible for the conduct and social life of the hall which she supervises and is glad to advise with students in cases of illness and emergency, or to give them whatever information they wish concerning the University and town.

Both the undergraduate and graduate dormitories open at 7:00 A.M. daily. The undergraduate dormitory closes at 11:30 P.M. Sunday through Thursday, and at 12:30 A.M. Friday and Saturday; graduate dormitories close at 12 midnight Sunday through Thursday, and at 1:00 A.M. Friday and Saturday.

SOCIAL REGULATIONS FOR MEN...Insofar as practical, all men students are left to the regulation of their own affairs, subject to the University's general rules with regard to student conduct and within the jurisdiction of the Faculty Committee on Student Conduct. There are no prescribed closing hours for men's dormitories.

Student counselors are in residence in all men's housing units to advise students in cases of illness or emergency, or to give them whatever information they wish concerning the University or town.

OPENING-CLOSING DATES OF DORMITORIES...All Residential Halls will be open for occupancy Sunday, July 6, at 8 A.M.; they will close at 2 P.M., Sunday, August 17. *Earlier or later occupancy will not be possible under any circumstances.*

APPLICATION FOR ROOMS...Applications for rooms in Residential Halls cannot be given consideration unless they are submitted on official application forms to the office of Residential Halls. Room application forms are distributed *only* by the office of the Summer Session *after* admission has been approved, and each student will automatically receive one with his certificate of admission to the Summer Session.

DEPOSITS WITH APPLICATIONS...A \$5.00 room deposit check or money order, drawn to the order of Cornell University, must accompany each application for a room in any of the Residential Halls if the application is to receive consideration. This deposit is not applied on the residence charge. If the student occupies an assigned room for even a limited amount of time, the deposit is held until after the end of the Session to cover the return of keys and any damage to building or furniture other

than that occasioned by normal use, and to ensure completion of the lease.

REFUNDS OF DEPOSITS AFTER WITHDRAWAL OF ROOM APPLICATIONS. . . The \$5.00 room deposit will be refunded if the applicant files with the Director of Residential Halls written intention to withdraw the application for assignment by June 15, or within two weeks of applications dated June 2 or later. No \$5.00 room deposit will be refunded on cancellations received on or after the day of registration.

OFF-CAMPUS HOUSING. . . The Off-Campus Housing Office in Day Hall is maintained by the Department of Residential Halls. This office is a bureau of information only, maintaining files of voluntarily listed accommodations for the use of students who call at the office. Such lists cannot be mailed to prospective students.

Students wishing to sublet houses or apartments off campus are advised to arrive in Ithaca in advance of registration in order to secure such quarters. Rentals of sublet houses and apartments for the Summer Session range from \$50.00 to \$100.00 per month.

There is normally an adequate supply of rooms available in off-campus locations for the Summer Session. These rooms vary considerably in comfort, convenience, and safety. Before leasing a room, careful consideration should be given such details as distance from campus, nearness to eating places, price, ventilation, sanitation, furnishings, and fire escapes. Arrival in Ithaca a few days in advance of registration day will assure students of a better selection of off-campus rooms. It is expected that in 1952 rentals will range from \$5.00 to \$10.00 weekly.

DINING ROOMS AND CAFETERIAS. . . The dining facilities of Willard Straight Hall and the cafeteria in Martha Van Rensselaer Hall are open to both men and women students. Board may be obtained in these places, or in cafeterias, dining rooms, and restaurants near the campus, at approximately \$1.75 to \$2.25 a day.

COST OF LIVING. . . An estimate of the cost of living in Ithaca in the summer can be made by consulting the figures given in the preceding paragraphs. In private houses rentals vary according to the location. Rooms are rented with the understanding that they will be occupied for the entire Session unless both parties agree otherwise.

COUNSELING SERVICES

The office of the Dean of Men and Dean of Women is on the first floor of Day Hall. This office maintains the following services.

PART-TIME EMPLOYMENT OFFICE. . . Student employment opportunities during the Summer Session are limited because of the short-

ness of the Session and the fact that offices and other services can run with smaller staffs. This office lists any part-time jobs which are available, and those students interested in working should register their needs. The office will refer qualified students to prospective employers.

INDIVIDUAL COUNSELING . . . There is a trained guidance and counseling staff for all students who feel a need for social, personal, educational, or vocational counseling.

TESTING . . . In cooperation with the University Testing Service, appropriate tests will be administered if, in the counseling process, need for aptitude or interest testing is indicated.

VOCATIONAL INFORMATION . . . A vocational information library is maintained.

COUNSELING FOR FOREIGN STUDENTS . . . The University has on its staff a Counselor to Foreign Students whose duty it is to look after the welfare of all students from other countries. It is suggested that all foreign students write to him before coming to Ithaca or call upon him soon after arrival. He will help them find suitable living quarters and assist them with introductions. Letters should be addressed to Mr. Donald C. Kerr, Counselor to Foreign Students, Day Hall, Cornell University, Ithaca, New York.

PROGRAM OF EXTRACURRICULAR ACTIVITIES

The Summer Session, in cooperation with departments and agencies of the University, arranges a balanced extracurricular program of public events and recreation designed to enrich the campus experience of its students, especially those who are not at the University during the winter.

THE WEEKLY CALENDAR AND ANNOUNCEMENTS . . . A weekly calendar, issued and posted on each Saturday of the Summer Session, contains not only all official notices but details of public events and also interesting news about special activities on the campus. Copies may be obtained without charge at the desk in Willard Straight Hall, at the Summer Session office, and at other University offices. Students are advised to secure copies regularly.

LECTURES . . . Public lectures, open to all Summer Session students, are given on selected Wednesday evenings of the Session. Both non-resident lecturers and members of the Faculty take part in the series, and the subjects are chosen for their general interest and timeliness. In 1951 the lecturers and their topics were:

Dr. David Daiches, University Lecturer, University of Cambridge, England: "Higher Education in the Humanities."

Dr. Willard Thorp, Professor of English, Princeton University: "The Limits of Naturalism."

Dr. Alan S. Downer, Professor of English, Princeton University: "The Drama at Mid-Century."

Dr. Morris E. Opler, Professor of Anthropology, Cornell University: "India and the United States—A Study of East-West Relations."

Mr. Edward H. Graham, Chief, Biology Division, United States Department of Agriculture: "A Biologist Looks at Land Use and the Conservation Movement."

READING HOURS . . . On Sunday evenings in the Browsing Library at Willard Straight Hall, members of the Faculty read aloud passages of literature of their own selection.

SAGE CHAPEL . . . Religious services are conducted in Sage Chapel throughout the academic year by clergymen of various religious denominations. There will be services in the Chapel on five Sundays during the Summer Session, July 13 to August 10, inclusive.

CONCERTS . . . A series of Thursday evening concerts is given in the Memorial Room of Willard Straight Hall, open without charge to students in the Summer Session.

RECORDED MUSIC . . . On Sunday afternoons recorded music is broadcast on the Library Slope. If the weather is inclement it is broadcast in the Memorial Room, Willard Straight Hall. Recitals of recorded music are arranged for each Wednesday and Saturday evening in the Music Room, Willard Straight Hall.

RECREATIONAL FOLK AND SQUARE DANCING . . . For students and Faculty members on Monday evenings. An instructor is present.

SUMMER THEATRE . . . Performances are given by the Summer Players on Friday and Saturday evenings in the University Theatre, Willard Straight Hall. Admission is charged. In 1951 the series included: "The Wild Duck," by Henrik Ibsen; "The Importance of Being Earnest," by Oscar Wilde; a program of one-act plays, including original works by Cornell authors; and "The Detour," by Owen Davis.

The Summer Session productions of the Theatre are under the general direction of Professors Stainton, Drummond, and Albright, assisted by other members of the direction staff. Regularly enrolled members of the classes in Speech and Drama may compete for places in the casts and production staffs. Detailed announcements will be made in the various classes.

FILMS . . . Noteworthy European and American films are presented weekly by the University Theatre during the Summer Session. Admis-

sion is charged. In 1951 the following films were shown: "The Blue Angel," "Major Barbara," "Orpheus," "Brief Encounter," "The Titan," "The Red Shoes," and "Paris 1900."

WILLARD STRAIGHT HALL...The student union of Cornell University contains an air-conditioned cafeteria for the service of regular meals and a snack bar for late afternoon and evening service, lounges for men and women, rooms for student meetings, for games, and for dancing, the University Theatre where motion pictures and dramatic productions are given each week, a billiards and games room, a barber shop for men, a browsing library well stocked with books of general interest, and a music and art room. On the upper floors of the Hall are sleeping rooms used principally by parents and guests of students, by alumni, and by guests of the University.

The Board of Managers of Willard Straight Hall not only cooperates in some of the events listed above, but also arranges for dances, open houses, teas, games, art exhibits, and other recreation and entertainment.

Willard Straight Hall is for the use of members of the University; but guests of members may secure guest cards for limited periods upon application to the Director of the Hall.

SPORTS...Tennis courts, conveniently located about the campus, are available for the use of Summer Session students, and a nine-hole golf course is operated by the University. A gorge at one end of Beebe Lake on the campus forms a natural swimming pool, where two guards are on duty every day of the Session from 1 to 6 P.M.

Private lessons in tennis, golf, and swimming are offered by members of the Department of Physical Education.

Tennis. Hours to be arranged upon registration at Barton Hall on July 7. Eight lessons and two lectures. Fee, \$15.

Golf. Hours to be arranged. Call Mr. Hall at the University Golf Course, Ext. 4411.

Swimming. Hours to be arranged. See Mr. Filley at Beebe Lake or call Ithaca 4-3188.

For more detailed information, address Mr. R. J. Kane, Director of Athletics, Schoellkopf Building.

An extracurricular course in equitation is also offered. Address inquiries about fees and hours to the Director of the Equitation Course—Summer Session, Barton Hall.

The Curriculum

COURSES OF INSTRUCTION . . . The listing is alphabetically by departmental subheadings under general fields of instruction. For offerings in particular subjects, consult the Index. Because of demands which may be placed upon the instructing staff, it may be necessary to substitute instructors for the ones named in the course descriptions. The Director reserves the right to cancel any course for which, through unforeseen circumstances, satisfactory instruction or facilities cannot be provided.

UNIT COURSES . . . Unit courses, less than six weeks in length, are indicated by a *u* following the course number, and their dates are given in the descriptions.

COURSES WITH FEES ATTACHED . . . Courses requiring laboratory or other fees are marked by asterisks.

CLASS SCHEDULES . . . In most courses of instruction, classes will meet five times a week, on each weekday except Saturday. Class periods begin on the hour, unless otherwise indicated, and are fifty minutes in length. Laboratory periods are of various lengths, as indicated in the descriptions of courses which include laboratory work.

ROOM SCHEDULES . . . The meeting places of courses are given in the course descriptions. Any changes in room assignments will be found in a supplementary announcement which will be distributed to students on registration day.

SCHEDULE OF EXAMINATIONS . . . With a few exceptions, examinations will be held on Friday, August 15, and Saturday, August 16, at the hours indicated by the schedule below; in the exceptional cases, the examination will be held on Thursday, August 14, at 2. The usual classrooms will be used unless a change is announced by the instructor.

In courses which meet for more than one hour daily, the examination period is determined by the first hour at which they meet. For example, Economics 101 meets daily at 10 and at 11; the examination will be held on Friday at 10:30. In courses which include both lecture and laboratory periods, the examination period is determined by the lecture hour. In courses in which no examination is to be given, an announcement to that effect will be made by the instructor; in such cases the last meeting of each course will be held in the examination period for that course.

Examinations will be held as follows:

- 8 o'clock classes, Friday at 8.
- 9 o'clock classes, Saturday at 8.
- 10 o'clock classes, Friday at 10:30.
- 11 o'clock classes, Saturday at 10:30.
- 12 o'clock classes, Friday at 2.
- Afternoon classes, Saturday at 2.

AGRICULTURE

AGRICULTURAL ECONOMICS

*Ag.Ec. 4. *RURAL ECONOMICS*. (U,G) 3 hours credit. Lectures, M T W Th F 10. Field trips or discussion periods, W 2-5. Warren 201. Associate Professor KEARL.

This course is designed to give persons who have not had formal training in agricultural economics, but who plan to work in rural areas, a general knowledge of the economic aspects of farming and rural life. Emphasis will be placed on farming as a business, types of farms, economic differences in land, factors affecting farming returns, and the marketing of farm products. Attention will also be given to the function of agricultural cooperatives, economic and social agencies serving rural communities, and the development of public policies relating to agriculture and rural areas. Field trips will be taken to near-by rural areas during some of the afternoon periods. Approximate cost for transportation, \$5. Fee for materials, \$2.

*Ag.Ec. 140. *MARKETING*. (U,G) 3 hours credit. Lectures, M T W Th F 11. Discussions or field trips, T 2-5. Warren 201. Professor DARRAH.

Characteristics of the demand for and supply of farm products; alternative marketing channels; and services and costs involved in marketing. Approximate cost for transportation, \$5. Fee for materials, \$2.

AGRICULTURAL ENGINEERING

*Ag.En. 42. *WELDING*. (U,G) 1 hour credit. Two laboratory periods: Sec. 1, M W 9-12; Sec. 2, M W 1-4. Limited to 16 per section. Agricultural Engineering Quonset. Mr. CLOUGH.

A course giving fundamentals and practice of oxyacetylene welding and cutting of metals; spot welding and arc welding with special emphasis on farm shop construction and repair. Laboratory fee, \$5.

*Ag.En. 43. *ADVANCED FARM SHOP*. (U,G) 1 or 2 hours credit. Two three-hour laboratory periods to be arranged for each hour credit. Permission of instructor required. Agricultural Engineering Laboratory. Mr. CLOUGH and Professor FOSS.

Construction and repair jobs are used to teach the operation, care, and adjustments of power shop tools. Work is divided between machine tools and advanced welding (1 hour) and power tools used in woodworking and sheet metal (1 hour). Laboratory fee, \$5.

*Ag.En. 141. *TEACHING FARM MECHANICS*. (U,G) 3 hours credit. Lectures, M T W Th F 10. Laboratory, Sec. 1, M F 1-4; Sec. 2, T Th 1-4. Limited

to 16 per section. Agricultural Engineering Laboratory. Professor Foss.

A course designed to prepare the teacher to lay out, equip, and manage the general shop. Methods of teaching jobs in Farm Shop, Soil and Water, Machinery and Power, Structures, and Rural Electrification are included. A field trip to near-by high school agricultural shops is taken. Laboratory fee, \$5.

Ag.En. 251. *SPECIAL PROBLEMS IN AGRICULTURAL ENGINEERING.* (G) 1 or more hours credit. Prerequisite, adequate ability and training for the work proposed. See Professor FRENCH, Stocking Hall, for permission to register. Professor FRENCH and staff.

Special work in any branch of agricultural engineering on problems under investigation by the department or of special interest to the student, provided, in the latter case, the adequate facilities can be obtained.

Ag.En. 121. See Agronomy 121, below.

AGRONOMY

*Agron. 121. *FARM PRACTICE IN SOIL AND WATER CONSERVATION.* (U,G) 3 hours credit. Prerequisite, Agronomy 1 or equivalent. Lectures, M T W Th F 1; laboratory, T Th 2-5 or M W 2-5. Caldwell 143. Associate Professors ZWERMAN and GRAY.

A beginning course in principles and methods used in soil conservation. Emphasis will be placed on New York State conditions. Engineering and agronomic aspects of soil conservation will receive primary consideration. Students who have credit for Agronomy 102 or Agricultural Engineering 221 should consult the instructor before registering. Four to six short field trips; expenses to be prorated.

ANIMAL HUSBANDRY

*An.Hus. 111. *LABORATORY WORK IN ANIMAL NUTRITION.* (U,G) 3 hours credit. Prerequisite, a course in quantitative analysis. Registration by permission. M T W Th F 1-5. Stocking Hall 160. Assistant Professor WARNER.

This course is designed to familiarize the student with the principles of animal experimentation as well as the application of chemical methods to the solution of fundamental problems of nutrition. Laboratory fee, \$15.

An.Hus. 151. *RECENT ADVANCES IN LIVESTOCK PRODUCTION.* (U, G) 2 hours credit. Lectures, M T W Th F 8. Wing Hall, Room E. Assistant Professor SCHULTZ.

A presentation and discussion of recent developments in the nutrition, breeding, and management of livestock, with special emphasis on dairy cattle.

BIOLOGICAL SCIENCES

BACTERIOLOGY

*Bact. 1. *GENERAL BACTERIOLOGY.* (U,G) 2 or 4 hours credit. Lectures, M T W Th F 1:40, Stocking 218; laboratory, M T W Th F 2:30-4:30, Stocking 301. Assistant Professor VAN DEMARK and Mr. GUSS.

An introductory course giving a general survey of the field of bacteriology, together with the fundamentals essential to further work in the subject. Laboratory fee, \$10, for those seeking four credit hours.

BIOCHEMISTRY

Bioch. 101. *GENERAL BIOCHEMISTRY*. (U,G) 4 hours credit. Prerequisite, organic chemistry. Lectures, M T W Th F 8-10. Savage 145. Professor WILLIAMS.

*Bioch. 102. *GENERAL BIOCHEMISTRY*. (U,G) 2 hours credit. Prerequisite, quantitative analysis, and parallel, Course 101. Laboratory, M T W Th F 10-12:30. Savage 230. Professor WILLIAMS.

Laboratory practice with plant and animal materials and the experimental study of their properties. Laboratory fee, \$15.

BOTANY

*Bot. 17. *SHRUBS OF THE NORTHERN APPALACHIAN REGION*. (U,G) 2 hours credit. Prerequisite, a course in general botany. This course may parallel Botany 117 or be taken independently. Laboratory, T Th 2-5; field trips, F 2-6. Plant Science 211. Professor CLAUSEN and instructor.

A study of the native and common introduced shrubs of the northern Appalachian Region, with emphasis on distinguishing characteristics and recognition in the field. The trips afford opportunity to observe living examples of almost all of the species. Laboratory fee, \$3.

*Bot. 31. *PLANT PHYSIOLOGY*. (U,G) 4 hours credit. Prerequisite, general botany or biology and elementary chemistry. Lectures, M T W Th F 9, Plant Science 141; laboratory, 10-12, Plant Science 227. Professor CLARK.

This course is designed to acquaint the student with the important life processes of plants. Topics such as water relations, photosynthesis, translocation, digestion, respiration, mineral nutrition, and growth relations are studied in some detail, and particular emphasis is placed, both in laboratory and in classrooms, on discussion of the principles and their applications to living plants. Laboratory fee, \$5.

*Bot. 117. *TAXONOMY OF VASCULAR PLANTS*. (U,G) 4 hours credit. Prerequisite, a course in general botany. Students taking this course are advised to take no other work but may combine this course with Botany 17. Additional laboratory hours will be arranged for students taking both courses. Lectures, M T W Th F 10, Plant Science 141; laboratory, T Th 2-5, Plant Science 211; field trips, M W 2-6. Professor CLAUSEN and instructor.

A survey of the kinds of seed plants and ferns, their classification, gross morphology, geographical distribution and economic importance, together with an introduction to the literature and principles of taxonomy. Laboratory fee, \$6.

CONSERVATION

Cons. 1. *CONSERVATION OF WILDLIFE*. (U,G) 2 hours credit. Lectures, M T W Th F 8. Fernow 122. Professor SWANSON.

An introduction to the wildlife resources of North America; the importance of the flora and fauna in our economic and cultural life; the history of wildlife conservation, and the work of state and federal wildlife agencies.

Cons. 3. *CONSERVATION OF NATURAL RESOURCES*. (U,G) 2 hours credit. Lectures, M T W Th F 11. Fernow 122. Professor GUISE.

The natural-resource problems of the United States; natural resources in national welfare; the conservation movement; public land policies; natural resources

of major importance; use and exploitation; present inventories; problems of the immediate and long-range future; essential points in a national conservation program.

Cons. 7. *INTRODUCTION TO THE BIRD LIFE OF AMERICA*. (U) 2 hours credit. Lectures, M 7:30 P.M., T Th 4:30 P.M.; field trips, S 2 P.M. or W 5:30 A.M., and one trip by appointment. Fernow 122. Professor A. A. ALLEN and Dr. E. G. ALLEN.

A course designed for those interested in increasing their knowledge of birds but not planning advanced work in ornithology. Students majoring in biological sciences or conservation should register for Course 9.

By the use of color films, slides, phonograph records, and specimens, students will get acquainted with the local bird life and the more common birds of other parts of the United States and Canada. Field trips will be conducted to the best local areas for observing birds.

*Cons. 8. *ELEMENTARY TAXONOMY AND NATURAL HISTORY OF THE VERTEBRATES*. (U,G) 4 hours credit. Prerequisite, general zoology or biology. Lectures, M T W Th 1:40-2:30. Laboratory and field work, M T W Th 2:30-5:30. Fernow 14. Professor HAMILTON.

Lectures on fish, amphibians, reptiles, and mammals; their habits, life histories, coloration, behavior, reproduction, and adaptations, together with their classification, nomenclature, characters, and relationships. Laboratory study of the parts employed in the classification of these groups with special training on the identification of the vertebrates of eastern United States. Field work is partly to give practice in field observations and in ready identification of local vertebrates in their natural environment and to introduce ecological methods. Fee, \$4.50.

*Cons. 9. *GENERAL ORNITHOLOGY*. (U,G) 3 hours credit. Lectures, M W F 9; laboratory, M W 1:40-4:30 or M W F 10-12; field trips, T Th 5:30-8:00 A.M. Fernow 210. Professor A. A. ALLEN and Dr. E. G. ALLEN.

An introduction to the study of birds, and particularly the local species; their songs and habits. The lectures cover classification, migration, coloration, song, nest building, eggs, care of young, methods of attracting birds, and their economic importance. The laboratory work with bird skins, nests, and eggs gives an intimate knowledge of the birds of eastern North America and their life histories and distribution, and familiarity with the use of manuals. The aim of the field work is the identification of birds by their songs and habits as well as by their plumage. Fee, \$3.

*Cons. 25. *MAMMALOLOGY*. (U,G) 2 hours credit. Prerequisite, Course 8 or permission of instructor. Lectures, F 9 and 1:40-2:30; laboratory, F 10-12 and 2:30-5:30. Fernow 14. Professor HAMILTON.

Principal phases of mammalian life; origin, distribution, habits, and literature. Laboratory periods are devoted to methods of field collecting, census taking, life-history studies, preparation of skins and skeletons, and identification of North American species. Fee, \$3.

*Cons. 126. *ADVANCED ORNITHOLOGY*. (U,G) 3 hours credit. Prerequisite, Course 9 or its equivalent; with special permission may be taken with Course 9. Lectures, T Th 9; laboratory, T Th 1:40-4:30, and one other period by appointment. Fernow 212. Professor A. A. ALLEN. Students desiring this course should write Professor ALLEN for reservations.

The structure and classification of the birds of the world; geographical distribution; the preparation of bird skins and bird photography. Fee, \$3.

Cons. 128. *HISTORY AND LITERATURE OF ORNITHOLOGY*. (U,G) 1 hour credit. Lectures, T Th 10. Fernow 210. Dr. E. G. ALLEN.

An introduction to the evolution of ornithology in zoological science; the leading writers and bird artists from Aristotle to the present, together with the main sources and aids for the preparation of bibliographies.

Cons. 400-405. *RESEARCH PROBLEMS*. (U,G) Credit and hours to be arranged. Prerequisite, adequate preparation and permission of instructor.

401. *HERPETOLOGY*. Professor HAMILTON.

403. *MAMMALOLOGY*. Professor HAMILTON.

404. *ORNITHOLOGY*. Professor ALLEN.

405. *WILDLIFE MANAGEMENT*. Professor SWANSON.

406. *FORESTRY*. Professor GUISE.

ENTOMOLOGY AND LIMNOLOGY

*Entom. 142. *ECONOMIC ENTOMOLOGY*. (U,G) 3 hours credit. Lectures, M T W Th F 11, Comstock 145; laboratory, M W 2-5, Comstock 100. Professor WATKINS.

Lectures on the structure and identification of insects, position of insects in the animal kingdom, the orders of major importance, principles of insect control, commonly used insecticides, life histories and habits of selected insects attacking plant and animal crops in New York. Laboratory and field exercises on life histories, recognition and control of common insect pests. Practice in the collection and preservation of insects. Laboratory fee, \$4.50.

*Entom. 171. *LIMNOLOGY*. (U,G) 3 hours credit. Prerequisite, an introductory course in biology or zoology. Lectures, T Th 9, Comstock 145; laboratory, T Th 10-12:30 and 2-5, Comstock 110. Professor BRADSHAW.

This course deals with the various fresh-water environments and their animal associations. It includes a study of the physical, chemical, and biological factors found operating in lakes, ponds, and streams and the standard limnological methods used in their determination. Some time is devoted to identification of organisms; however, emphasis is placed upon the behavior, distribution, and life history of the common aquatic organisms of the region. Laboratory fee, \$4.50.

*Entom. 303. *SPECIAL PROBLEMS IN ECONOMIC ENTOMOLOGY*. (U,G) Credit and hours to be arranged. Professor WATKINS.

This course may be elected by qualified persons with permission of the instructor under whom the work is done. Laboratory fee: variable according to the nature of the problem.

*Entom. 306. *SPECIAL PROBLEMS IN LIMNOLOGY*. (U,G) Credit and hours to be arranged. Professor BRADSHAW.

This course may be elected by qualified persons with the permission of the instructor under whom the work is done. Laboratory fee: variable according to the nature of the problem.

FLORICULTURE AND ORNAMENTAL HORTICULTURE

Courses in this department are offered for three groups of people. Courses 3, 12, and 13, are of interest to amateurs. Courses 33 and 119 are offered for prac-

ticing nurserymen, park and estate superintendents, landscape engineers, and architects. Courses 12, 13, 33, and 119 are given for advanced students in horticulture and landscape gardening.

*Flor. 3. *INTRODUCTORY LANDSCAPE GARDENING*. (U,G) 2 hours credit. Lectures, M T W Th 11-12:30; laboratory, F 10-12:30. Plant Science 37. Assistant Professor LEE and Associate Professors CORNMAN, PORTER, and PRIDHAM.

An introduction to the woody and herbaceous ornamental plants, their use and culture. A course intended for teachers, home owners, and those who for professional or personal reasons desire an understanding of the principles of landscape gardening and ornamental plants as well as specific information in this field. Not open to majors in the Department of Floriculture and Ornamental Horticulture. Laboratory fee, \$2.50.

*Flor. 12. *HERBACEOUS PLANT MATERIALS*. (U,G) 3 hours credit. Lectures, M T W Th 8, Plant Science 37; Laboratory, T F 2-5, Plant Science 15. Assistant Professor LEE.

A study of the ornamental herbaceous plants used in landscape and garden plantings. Emphasis is placed on the identification, uses, and culture of annuals and summer flowering perennials. All members of the class will participate in an all-day excursion to visit private estates in Rochester. Transportation fee, \$5; laboratory fee, \$2.

*Flor. 13. *WOODY PLANT MATERIALS FOR LANDSCAPE PLANTING*. (U,G) 4 hours credit. Lectures, M T W Th 9, Plant Science 37; laboratory and field work, M T W Th 10-12, Plant Science 29. Associate Professor CORNMAN.

A study of the characteristics and requirements of trees, shrubs, and vines for landscape planting. The laboratories and field trips enable the student to recognize common woody ornamental plants. All members of the class will participate in an all-day excursion to visit public parks in Rochester. Transportation fee, \$5; laboratory fee, \$3.

*Flor. 33. *PLANTING DESIGN*. (U,G) 3 hours credit. Lectures, T Th 1, F S 8; laboratory, Th 2-5, S 9-12. Plant Science 433. Associate Professor PORTER.

Knowledge of common plant materials is prerequisite. Some experience in drawing plans and sketches will be of value. The course covers the theory and principles of design as they relate to all types of planting problems together with the practical considerations that affect the selection and use of plants. Laboratory fee, \$5.

*Flor. 119. *GARDEN PLANTING AND MAINTENANCE*. (U,G) 3 hours credit. Prerequisite, elementary courses in botany, plant physiology, and ornamental horticulture. Lectures, M W F 1 and F 9; laboratory, M W 2-5. Plant Science 37. Associate Professor PRIDHAM.

The growing, transplanting, and maintenance of garden flowers, trees, and shrubs. Special consideration is given to the application of basic science to modern garden practice, soil and fertilizers, transplanting, watering, weed control, and pruning. Consideration is also given to special plant materials for specific locations and purposes. Trips will be made to private estate and park plantings. Transportation fee, \$5; laboratory fee, \$3.

GENETICS

*Genet. 101. *GENERAL GENETICS*. (U,G) 4 hours credit. Prerequisite, a course in botany, zoology, or biology. Lectures, M T W Th F 10, Plant Science

37; laboratory, M T W Th F 11-12:30, Plant Science 146. Professor MURPHY.

A general study of the fundamental principles of genetics in plants and animals. Discussions of simple cases of inheritance, gene interaction, gene linkage, and the chromosome theory of heredity, inheritance of quantitative characters, inheritance of sex, effects of inbreeding and crossing, the origin of heritable variations and their relation to evolution, and gene action. Laboratory fee, \$3.

ZOOLOGY

*Zool. 211-212. *COMPARATIVE ANATOMY OF THE VERTEBRATES*. (U,G) 6 hours credit. Prerequisite, introductory zoology or biology. M T W Th F 8-1. Stimson G-25 and 310. This course is the equivalent of Zoology 211-212. Associate Professor GILBERT and assistant.

A thorough study and dissection of representative vertebrate types, including a fish, amphibian, reptile, bird, and mammal, together with demonstrations on species other than the types dissected.

The course is intended to give students an evolutionary background for the study and appreciation of the structure of higher vertebrates, including man. Laboratory fee, \$20.

*Zool. 404. *GENERAL ANIMAL ECOLOGY*. (U,G) 4 hours credit. Prerequisite, introductory college zoology or biology. Lectures, M T W Th F 12, Stimson G-1; laboratory, M W F 2-6, Stimson 215. Associate Professor COLE.

A course designed to introduce the student to interrelationships between animals and the environments in which they live. Descriptions of the ways in which animals are affected by particular environmental conditions including climatic factors, population density, and the presence of other species of plants and animals. Field and laboratory study of local animals and habitats with special reference to the factors limiting animals to particular types of habitats. Fee, \$10.

EDUCATION

ADMINISTRATION AND CURRICULUM

Educ. 261. *FUNDAMENTALS OF EDUCATIONAL ORGANIZATION AND ADMINISTRATION*. (G) 2 hours credit. M T W Th F 8. Caldwell 143. Instructor to be announced.

A consideration of the main problems in organizing and administering the school program, including the services provided when school and community cooperate in meeting educational needs.

Educ. 267. *THE LEGAL PROBLEMS OF THE SCHOOL ADMINISTRATOR*. (G) 3 hours credit. M T W Th F 2-3:15. Comstock 145. Professor MACDONALD.

An analysis of representative problems in school administration having legal implications, with a discussion of the principles of law involved.

Educ. 268. *SEMINAR IN EDUCATIONAL ADMINISTRATION*. (G) 2 hours credit. M T W Th F 10. East Roberts 223. Instructor to be announced.

Educ. 276. *PRINCIPLES OF CURRICULUM BUILDING*. (G) 2 hours credit. M T W Th F 8. East Roberts 223. Associate Professor ELLIOTT.

A consideration of the major problems, principles, and techniques in determining educational objectives and curriculum scope and content in elementary and

secondary schools. Special attention will be given to recent developments in the curriculum.

Educ. 293. *ADMINISTRATION AND SUPERVISION OF ADULT EDUCATION*. (G) 2 hours credit. For administrators, supervisors, teachers, extension agents, social workers, and others interested in adult education. M T W Th F 11. Van Rensselaer 124. Professor LEAGANS and staff.

The course approach will be from the viewpoint of the administrator or supervisor of adult education programs. A brief survey of the development, nature, scope, and significance of adult education in our present social order will first be made as a basis for considering the following major tasks of leaders of adult education: (1) understanding the nature of the administrative and supervisory process; (2) identifying the needs and interests of adults; (3) organizing a course of study; (4) selection and training of teachers and leaders; (5) recruiting students; (6) coordinating the program; (7) evaluating instruction; and (8) administering the laws and other regulations pertaining to specialized forms of adult education.

AGRICULTURAL EDUCATION

Educ. 230. *SEMINAR IN AGRICULTURAL EDUCATION*. (G) 2 hours credit. For students whose progress in graduate study is satisfactory. M T W Th F 11. Plant Science 141. Professor HOSKINS.

Educ. 232. *EVALUATION AND PROGRAM PLANNING IN AGRICULTURAL EDUCATION*. (G) (U by permission) 2 or 3 hours credit. W 1-5:30 and one hour to be arranged. East Roberts 223. Professor HOSKINS.

The evaluation of total programs of vocational education in agriculture in actual situations as a basis for effective program planning.

Educ. 238. *MATERIALS OF INSTRUCTION IN VOCATIONAL AGRICULTURE*. (G) 4-6 hours credit. Permission of the instructor is required. M T W Th F 8-3:30. Stone 205. Assistant Professor KUNSELA.

A workshop designed to provide opportunity for teachers to develop instructional materials for agricultural education in secondary schools. Services of specialists and laboratory facilities will be made available. Participating teachers will be expected to have completed preliminary work and will be expected to bring such instructional materials with them for further development and completion.

Educ. 239. *PREVOCATIONAL AGRICULTURE IN THE SECONDARY SCHOOL*. (G) (U by permission) 2 hours credit. M T W Th F 8. Comstock 145. Associate Professor SMITH.

Needs to be met through instruction in agriculture of a prevocational nature; content and methods appropriate to such needs, including emphasis upon preparation for living in rural areas.

EDUCATIONAL PSYCHOLOGY AND MEASUREMENT

Educ. 111. *EDUCATIONAL PSYCHOLOGY*. (U) 2 hours credit. M T W Th F 9. East Roberts 223. Assistant Professor ANDRUS.

Designed for prospective teachers. Consideration of essential facts and principles of psychology and their practical application to problems in education.

Educ. 211. *EDUCATIONAL PSYCHOLOGY*. (G) 2 hours credit. M T W Th F 11. Savage 145. Professor GLOCK.

For experienced teachers, supervisors, guidance workers, and administrators. The course is designed to help students with problems in the field of educational psychology. Individual students may center their interests in such fields as reading, arithmetic, spelling, discipline, personality, and adjustment.

Educ. 215. *PSYCHOLOGY OF ADOLESCENCE*. (U,G) 2 hours credit. M T W Th F 10. Comstock 145. Associate Professor ELLIOTT.

A study of behavior during adolescence; tasks involved in developing maturity; effect of preceding stages of development on maturity and adolescence.

Educ. 251. *EDUCATIONAL MEASUREMENT*. (G) 2 hours credit. Prerequisite, a course in educational psychology or permission of instructor. M T W Th F 10. Warren 225. Assistant Professor AHMANN.

A study of the construction and administration of achievement tests and the use of aptitude tests, achievement tests, and other measuring instruments in the classification and guidance of pupils and improvement of instruction.

Educ. 253. *INTRODUCTION TO EDUCATIONAL STATISTICS*. (G) 2 hours credit. M T W Th F 8. Warren 201. Assistant Professor AHMANN.

A study of common statistical procedures encountered in educational literature and research. The course includes the computation and interpretation of descriptive measures and tests of significance.

Educ. 255. *USE AND INTERPRETATION OF TESTS IN GUIDANCE*. (G) 2 hours credit. A course in measurement is prerequisite. M T W Th F 9. Warren 201. Professor WINSOR.

This course deals with the development, use, interpretation, and significance of psychological measuring devices as a basis for analyzing the capacities, interests, and abilities of individuals seeking vocational guidance.

PSYCHOLOGICAL TESTS. (See Psychology, page 62.)

PSYCHOLOGY OF EXCEPTIONAL CHILDREN. (See Psychology, page 63.)

ELEMENTARY EDUCATION

Educ. 24. *SOCIAL STUDIES IN THE ELEMENTARY SCHOOL*. (G) 2 hours credit. M T W Th F 8. Goldwin Smith 242. Miss KLEE.

This course will be conducted as a workshop in which group discussion is combined with curriculum planning. Attention will be given to the contributions which the social studies can make to general elementary education. Each member of the class will have the opportunity to organize learning experiences for the grade level in which he is most interested.

Educ. 243. *PROCEDURES AND TECHNIQUES IN SUPERVISION*. (G) 2 hours credit. M T W Th F 9. Warren 225. Professor MOORE.

Designed for superintendents, supervisors, and principals; inexperienced students admitted only by permission. A consideration of the nature and purposes of supervision; the improvement of the learning-teaching process; skill in observations; analysis of methods; relationships between general and specific objectives; selection, analysis, and organization of subject matter; measuring and testing results; assisting teachers in professional growth.

Educ. 247. *SEMINAR IN ELEMENTARY EDUCATION*. (G) 2 hours credit. M W F 2-3:30. Warren 225. Mrs. SMITH.

Designed for inexperienced teachers in the elementary school. A consideration of the use of libraries, audio-visual aids and other teaching materials; the keeping of records and preparing of reports; relationships with principals and supervisors; and pupil personnel problems of the elementary school.

Educ. 313. *METHODS OF TEACHING READING*. (G) 2 hours credit. M T W Th F 12. Savage 145. Miss LA PRAY.

Designed for teachers, supervisors, and administrators in the elementary school. The basis for the improvement of reading instruction. Appraisal of teaching practices and instructional materials; group testing programs and individual diagnostic procedures; remedial and corrective reading techniques.

Educ. 314. *ARITHMETIC IN THE ELEMENTARY SCHOOL*. (G) 2 hours credit. M T W Th F 10. Savage 100. Miss LA PRAY.

A course concerned with recent developments in the field of arithmetic, beginning with a survey of the history of numbers and proceeding to an evaluation of newer trends in the methods now being used. Each student may concentrate on the problems in the area in which he is most interested.

Educ. 225. *DEMONSTRATION SCHOOL*. 1 hour credit. M T W Th F 9-11:30. Conferences for observers, T and Th 2-3:30. Comstock 245. Professor MOORE, Miss LA PRAY, Miss KNAPP, and others.

A demonstration school exemplifying modern informal methods in elementary schools will be maintained on the campus for observational purposes. Special opportunities for observation will be scheduled for classes in supervision and methods.

GUIDANCE AND PERSONNEL ADMINISTRATION

Educ. 280. *STUDENT PERSONNEL ADMINISTRATION IN COLLEGES AND UNIVERSITIES*. (G) 2 hours credit. M T W Th F 12. Day 149. Dean ALLEN and Dr. PEARD.

The scope, organization, and development of a student personnel program. Discussion of specific areas by visiting lecturers. Consultation on specific problems brought from particular schools. Designed to assist personnel officers and school and college administrators.

Educ. 282. *EDUCATIONAL AND VOCATIONAL GUIDANCE*. (G) 2 hours credit. M T W Th F 9. East Roberts 222. Mr. BURROUGHS.

Principles and practices of educational and vocational guidance. Historical and theoretical background of the guidance movement; educational, vocational, and community information needed; the study of the individual; group methods; counseling; placement and follow-up; the organization, administration, and appraisal of guidance programs.

Educ. 283. *COUNSELING METHODS*. (G) 4 hours credit. M T W Th F 9-11. Prerequisite, Course 282 or equivalent. Caldwell 143. Mr. LAFORTUNE.

Primarily for graduate students who wish to become certified as counselors. Techniques for counseling with individuals concerning various kinds of educational, vocational, and social adjustment problems.

Educ. 285. *OCCUPATIONAL AND EDUCATIONAL INFORMATION*. (G) 4 hours credit. M T W Th F 11, and field trips as arranged. Caldwell 143. Dr. BOYLAN.

Survey and appraisal of occupations and educational opportunities; study of

sources of educational vocational information; job analysis; vocational trends. Field trips to places of employment.

Educ. 287. *PRACTICUM IN MEASUREMENT AND APPRAISAL FOR COUNSELORS*. (G) 2 hours credit. Prerequisites, 282, 283, and a course in testing. M T W Th F 10. East Roberts 222. Assistant Professor ANDRUS.

This course provides laboratory experience in the use of tests and other instruments for the psychological appraisal of individuals. It is one of the courses required for permanent certification in guidance in New York State.

HOME ECONOMICS EDUCATION

Educ. 403. *SPECIAL PROBLEMS IN HOME ECONOMICS EDUCATION*. (G) Credit and hours to be arranged. The staff of the Department.

This course provides opportunity for students to do independent advanced work with permission of the instructor with whom the problem is to be done.

Educ. 407. *THESIS AND RESEARCH IN HOME ECONOMICS EDUCATION*. (G) Credit and hours to be arranged. The staff of the Department.

Candidates for Masters' degrees, Ph.D. degrees, and Ed.D. degrees who are working on theses may register for this course with permission of their chairmen and the instructor.

*Educ. 433. *TEACHING HOME ECONOMICS AT THE SECONDARY SCHOOL LEVEL*. (G) 2 hours credit. M T W Th F 10. Van Rensselaer 124. Associate Professor MOSER.

Designed for students who have had experience in teaching home economics in secondary schools. Consideration will be given to program planning, teaching procedures, materials, and other pertinent problems students find important for home-making teachers at the secondary school level. Opportunity will be provided for work on individual problems. Fee, \$3.

*Educ. 449. *CURRICULUM PLANNING*. (G) 2-4 hours credit. M T W Th F 8. Van Rensselaer 121. Additional hours for students registered for 4 credits. T Th 2-4:30. Van Rensselaer 121 and 301. Assistant Professor BLACKWELL and Associate Professor MOSER.

Designed to help teachers in planning family-centered programs of home-making education. General sessions will be devoted to discussions of the principles of curriculum planning and their application to homemaking education. Students registered for 4 hours will work individually and in small interest groups on specific problems involved in planning programs for secondary schools and colleges. Fee, \$3.

*Educ. 455. *HOME ECONOMICS AND GENERAL EDUCATION*. (G) 2 hours credit. T W Th 11-12:30. Van Rensselaer 121. Associate Professor HOEFER, Coordinator.

In this course, consideration will be given to some of the recent developments in general education such as appraisal, developmental tasks, teacher-pupil planning, and family life education. Each week an authority will discuss one of these subjects. Following each presentation the group will consider the special implication for home economics education. Fee, \$3.

INDUSTRIAL EDUCATION

Educ. 332. *DEVELOPMENT OF COURSES OF STUDY IN INDUSTRIAL EDUCATION*. (U,G) 2 hours credit. M T W Th F 10. Old Armory Basement. Professor EMERSON.

Study of the principles and procedures of course-of-study development. Content will include objectives of general and vocational education and their bearing on courses of study; controls which influence courses; interrelationships of courses within the curriculum; evaluation of courses of study. Emphasis will be placed upon the development of specific courses based upon occupational and other analyses.

Educ. 334. *CONFERENCE LEADERSHIP AND OTHER INSTRUCTIONAL METHODS*. (U,G) 2 hours credit. M T W Th F 1-3. I. & L.R. Bldg. 17. Professor BEACH.

Study of the various methods of instruction applicable to adult groups with special reference to workers and supervisors in industry. Content will include a review of educational objectives and principles of learning; demonstration and discussion of on-the-job training, group teaching, conferences, panels, symposiums, role playing, and other methods; applications of these methods to specific situations. Special emphasis will be placed on group discussion leadership, and students will be expected to lead group discussions on current topics and problems.

Educ. 335. *WORKSHOP—DEVELOPMENT OF INSTRUCTIONAL MATERIALS*. (U,G) Section 1: 6 hours credit, M T W Th F 8-4, I.&L.R. Bldg. 50. Section 2: 2 hours credit, M T W Th F 2-4, Old Armory Basement. Messrs. RANNEY and COE.

A workshop designed to provide opportunity, through consultant service and laboratory facilities, for students to prepare and revise instructional materials for courses in industrial arts and industrial and technical education. Students will be expected to have done preliminary work on their instructional materials and to bring with them such data as will be useful. Permission of the instructor is required.

Educ. 630. *SUPERVISION OF INDUSTRIAL EDUCATION*. (U,G) 2 hours credit. M T W Th F 9. I.&L.R. Bldg. 23. Mr. NEWKIRK.

Study of the nature and purpose of educational supervision; fundamental principles of supervision; techniques and methods of supervision; the planning and organization of a supervisory program; the supervisor's responsibility for appraising the adequacy of equipment, materials, and supplies for instructional purposes; relationships of the supervisor to administrators and teachers; evaluation of student and teacher achievement.

Educ. 632. *ADMINISTRATION OF INDUSTRIAL EDUCATION*. (U,G) 2 hours credit. M T W Th F 8. Old Armory Basement. Professor EMERSON.

Study of administrative practices in industrial and technical schools; relationships of the administrator with other school officers, advisory committees and their functioning; public relations; problems of plant equipment; budgetary procedures; staff personnel relations; teacher selection and induction; student personnel procedures; evening school organization and administration.

Educ. 635. *SEMINAR IN INDUSTRIAL ARTS EDUCATION*. (G) 2 hours credit. M T W Th F 11. I.&L.R. Bldg. 23. Mr. NEWKIRK.

Intended for graduate students with experience in industrial arts education. A study of current problems affecting industrial arts education.

Educ. 638. *HUMAN RELATIONS IN EDUCATIONAL ADMINISTRATION*. (G) 2 hours credit. M T W Th F 11. I.&L.R. Bldg. Professor BARDWELL.

A course dealing with the human relations problems of school administrators and supervisors; relationships with teachers, parents, pupils, lay groups, and other school officials. A study of how the administrator can increase his own effectiveness by developing his skills in dealing with people.

Educ. 639. *CURRENT TRENDS AND PROBLEMS IN INDUSTRIAL EDUCATION*. (U,G) 2 hours credit. M T W Th F 9. I.&L.R. Bldg. 17. Mr. BARDWELL.

A study of recent trends and developments in industrial, technical, and industrial arts education in an attempt to evaluate their present contribution and their probable status in the educational scene in the years ahead, including their relationships to academic and general education as well as to business and industry.

Educ. 699. *SPECIAL STUDIES*. (G) Credit and hours to be arranged. Directed research in special problems.

NATURE STUDY AND SCIENCE EDUCATION

Educ. 106. *OUTDOOR LIVING AS A CONTRIBUTION TO GENERAL EDUCATION*. (U,G) 2 hours credit. Lectures, T Th 11; laboratory or field work, W F 2-4:30; overnights, and a weekend to be arranged. Fernow 8. Dr. THURBER.

Practice in living comfortably out-of-doors together with assistance in making such experiences meaningful to others. A preparation for leadership in school camping, scouting, and similar activities.

Educ. 107. *THE TEACHING OF NATURE STUDY AND ELEMENTARY SCHOOL SCIENCE*. (U,G) 2 hours credit. Lectures, M W F 11; laboratory or field work, T Th 2-4:30. Fernow 8. Dr. THURBER.

The content and method of nature study and elementary school science with emphasis on the study of living things. Based on the interests of elementary pupils and the needs of classroom teachers.

Educ. 108. *FIELD NATURAL HISTORY*. (U,G) 2 hours credit. Lectures, M W 2-2:50; field trips, M W 2:50-5:20, F 2-4:30. Fernow 8. Associate Professor GORDON.

Field trips and lectures devoted to a study of the natural history of various ecological units, with special emphasis on their contributions to the teaching of science at elementary and secondary levels.

Educ. 205. *THE TEACHING OF CONSERVATION* (U,G) 2 hours credit. Lectures, M T W Th F 9; field work, two Saturdays or the equivalent. An occasional evening meeting may be arranged in place of a lecture. Fernow 8. Assistant Professor ECKERT.

Consideration of the principles, materials, and methods of teaching the wise use of natural resources.

Educ. 207. *METHODS AND MATERIALS FOR THE TEACHING OF PHYSICAL SCIENCE*. (U,G) 2 hours credit. Lectures, M W F 8; laboratory, M W 2-4:30. Fernow 8. Assistant Professor ECKERT.

Consideration of problems of selection and organization of subject matter, of choice and use of materials, and of methods of teaching physics and chemistry.

Educ. 209. *THE DEVELOPMENT OF NATURE AND SCIENCE EDUCATION IN THE UNITED STATES*. (U,G) 2 hours credit. M T W Th F 10. Fernow 8. Associate Professor GORDON.

A survey of origins and developments in nature and science education, both in and out of schools, with emphasis on leaders and their philosophies.

RESEARCH AND SPECIAL STUDIES

Educ. 199. *INFORMAL STUDY IN EDUCATION*. (U) Credit as arranged. Members of the staff of the School of Education.

Educ. 299. *EDUCATIONAL RESEARCH PROCEDURES AND TECHNIQUES*. (G) 2 hours credit. M T W Th F 10. Savage 145. Associate Professor SMITH.

Meaning of scientific method and research; attention given to appropriate techniques, instruments, and devices for research activities in education.

Educ. 300. *SPECIAL STUDIES IN EDUCATION*. (G) Credit as arranged. Members of the staff of the School of Education.

Students working on theses or other research projects may register for this course. The staff members concerned must be consulted before registration.

SECONDARY EDUCATION

Educ. 33. *THE TEACHING OF ENGLISH IN SECONDARY SCHOOLS*. (U,G) 2 hours credit. M T W Th F 8. Goldwin Smith 248. Mrs. OCVIRK.

The course is designed to help inexperienced and experienced teachers with methods and materials in the teaching of secondary English. Emphasis will be placed on the teaching of literature, composition, both oral and written, grammar, mechanics of expression, and correct usage. The class procedure and content will be adapted to the needs of individual members. Opportunity will be given for unit planning and work on special electives.

Educ. 130. *SOCIAL STUDIES IN THE SECONDARY SCHOOL*. (U,G) 2 hours credit. M T W Th F 10. Goldwin Smith 248. Miss KLEE.

The course is offered to meet the needs of two groups, those who wish to satisfy teacher certification requirements, and teachers of experience who wish the opportunity to carry on projects of individual interest in the fields of instruction, curriculum, or evaluation. Prospective members of the class are invited to correspond with the instructor concerning details of the course and suggestions for individual study projects.

Educ. 315. *READING IN THE SECONDARY SCHOOL*. (G) 2 hours credit. M T W Th F 9. Plant Science 143. Professor GLOCK.

A course which proposes to aid secondary school teachers in locating reading problems, in determining causes of reading difficulty, and in organizing developmental and remedial programs.

THEORY AND PHILOSOPHY

Educ. 244. *PHILOSOPHY OF EDUCATION*. (G) 2 hours credit. M T W Th F 11. Warren 225. Professor MOORE.

A critical consideration of educational philosophies which are generally recognized as significant influences upon education as an essential in American life.

Educ. 294. *THE POSTWAR RECONSTRUCTION IN EDUCATION IN WESTERN EUROPE*. (U,G) 2 hours credit. M T W Th F 10. Plant Science 143. Dr. HANS.

A consideration of some of the major problems affecting educational reconstruction in Western Europe after 1944. Educational programs and tendencies in each of the several countries will be discussed.

Educ. 295. *COMPARATIVE EDUCATION*. (G) (U by permission) 2 hours credit. M T W Th F 12. Plant Science 143. Dr. HANS.

An introduction to a comparative study of the principal problems of education. Among the problems discussed will be those relating to race, language, geography

and climate, and economics. A comparison will be made of the educational institutions and ideas of a number of countries and regions.

SUMMER WORK CONFERENCE

The School of Education will conduct a one-week work conference entitled "Implementing Professional Improvement," to be offered during the week of August 11-16. The conference will be of interest to principals, superintendents, supervisors, curriculum directors, and others responsible for in-service training programs. For full information write to William Kneisel, School of Education, Stone Hall, Cornell University.

EXTENSION EDUCATION

From July 7 to July 26, inclusive, courses are offered primarily for the professional improvement of persons engaged in extension work in agriculture, home economics, and boys' and girls' club work. Emphasis is on extension teaching, 4-H Club organization, public policy, leadership, visual aids, and their application in extension education. Afternoons will be devoted to optional activities, such as field trips, visits to laboratories, recreation, and individual lectures. Applicants should note that these are unit courses. The tuition fee is \$40. For full particulars the Extension Service Summer School Announcement may be obtained by writing Professor L. D. Kelsey, Roberts Hall, Cornell University.

Each period is 75 minutes in length, with 15 minutes between classes. Courses daily except Saturday, July 19, and Saturday, July 26. A student may register in two courses only. Each course gives 1½ hours credit.

8 A.M.

Extch. 1u. *EXTENSION EVALUATION*. (G) 1½ hours credit. Daily. Warren 140. Associate Professor MOE.

A course designed to help extension workers systematically measure and evaluate the things they do and the results they achieve in relation to extension objectives. Evaluation will be interpreted as an integral part of the total educational process. The course will stress systematic analysis of a worker's day-to-day observations and and will also discuss questionnaire construction, sampling, interviewing, and analysis and interpretation of data. The principles of evaluation will be developed in relation to specific problems of class members.

Extch. 2u. *LEADERSHIP AND GROUP WORK* (G) 1½ hours credit. Daily. Warren 240. Associate Professor REEDER.

Designed for extension workers who are concerned with developing and training leaders and who would like some guides and tools for increasing the effectiveness of the groups with which they are working. Many of the basic principles and methods will be utilized in teaching the course, thus providing an opportunity to learn skills and to test some of the principles.

9:30 A.M.

Extch. 3u. *TEACHING IN EXTENSION EDUCATION*. (G) 1½ hours credit. Daily. Warren 140. Professor LEAGANS.

The course will deal with an analysis of basic principles in the teaching and

learning process and procedures for applying them in extension work. A review of the nature of the teaching and learning process will first be made as a foundation for considering the following major problems of the extension teacher: (1) selecting, analyzing, and stating teaching objectives useful in guiding the teaching effort; (2) providing learning experiences that are likely to contribute effectively to the attainment of objectives; (3) attaining effectiveness in the use of teaching methods and techniques; (4) organizing teaching effort so as to attain maximum learning; and (5) evaluating teaching activity and its outcomes. The course approach will assume that the function of extension teaching is to attain specified objectives previously arrived at through the process of program building. Students may find it useful, therefore, to bring with them statements of objectives of one or two current activities in their special field as a basis for applying the course materials to current problems.

Extch. 4u. *VISUAL AIDS*. (G) 1½ hours credit. Daily. Roberts 492. Professor BENNETT.

Instruction will be given in how to take and use photographs for slides, news, bulletins, and other educational purposes. Very little time will be spent on development (and then mostly as it relates to use of pictures). Preparation of teaching and demonstration materials including exhibits will be stressed. Work will be presented from the standpoint of county agents and specialists. Workshop methods will be used. Students are encouraged to bring their own problems and equipment.

11 A.M.

Extch. 5u. *EXTENSION WORK WITH 4-H CLUBS AND YOUNG ADULTS*. (G) 1½ hours credit. Daily. Warren 240. Professor LANG.

A course especially designed for county 4-H Club agents and other extension youth workers. It deals with interests and needs, objectives, planning, methods, and leader training for 4-H Club work. The course will be conducted as a semi-workshop. Each person will need to develop a term paper preferably based upon a real problem. To know one's problem before coming and how to state it clearly will be helpful. Students are urged to bring files of their own materials for use in class work. Persons interested especially in "young adult work" may be given individual attention.

Extch. 6u. *EXTENSION'S ROLE IN THE FIELD OF PUBLIC PROBLEMS*. (G) 1½ hours credit. Daily. Warren 140. Professor BOND.

County agents, home demonstration agents, and extension specialists are constantly faced with questions of fact regarding public policy and how to work with people in these broad social, economic, and political matters. This course gives an analysis of some of the more important public problems that involve organized or governmental action. These may be local, state, regional, national, or international, with political, social, or economic implications involving price controls, production controls, income plans, trade agreements, land use, social security, soil conservation, and the relationship of agriculture to other segments of our economy. Emphasis is on methods as well as subject matter.

*Extch. 7u. *PROBLEMS IN HOME FURNISHING*. (G) 1½ hours credit. Daily. Van Rensselaer 318. Associate Professor COMSTOCK.

Focused on work of the home furnishing specialist. Developing color plans for rooms; arranging furnishings for function and design; lighting; buying furnishings for design, construction, use, and care; discussion of demonstration materials, sources, and teaching methods. Three local field trips. Fee, \$10.

THE CURRICULUM ENGINEERING

CIVIL ENGINEERING

Engr. 2331. *FLUID MECHANICS*. (U) 3 hours credit. Prerequisite, Mechanics 1152. M T W Th F S 9. Temporary Building No. 1 229. Associate Professor REM.

Statics, dynamics of fluid flow, law of continuity, energy equation, turbulence, flow of compressible and incompressible fluids, impulse momentum relations, resistance of submerged bodies, lubrication, and hydraulic machinery. Several demonstration lectures are given to illustrate the principles of fluid mechanics.

Engr. 2902. *ENGINEERING LAW*. (U) 3 hours credit. M T W Th F S 8. Lincoln 321. Professor THATCHER.

An introductory course in the laws of contract, tort, agency, real property, water rights, forms of business organization, sales, and negotiable instruments; special emphasis on contract documents required on construction work; collateral topics such as workmen's compensation, mechanics' liens, arbitration, and patent law are also included.

Engr. 2903. *ECONOMICS OF ENGINEERING*. (U) 3 hours credit. Prerequisites, 2901 and 3231. M T W Th F S 9. Lincoln 321. Professor THATCHER.

The economic aspects of engineering and the application of principles of management to the work of the engineer; economic selection of materials, equipment, and structures; studies for the replacement of existing units; plant layouts; public works economy, the technique of estimating quantities and costs for various types of engineering projects.

MECHANICAL ENGINEERING

Engr. 3231. *PRINCIPLES OF ACCOUNTING AND COST FINDING*. (U,G) 3 hours credit. No prerequisite. Recitations, M T W Th F 10. Computing, M Th 2-4:30. West Sibley 20. Associate Professor SAMPSON.

A basic course in the principles of accounting including controlling accounts, special journals and ledgers, voucher system, business papers, manufacturing cost systems, and analysis of financial statements.

Engr. 3235. *INDUSTRIAL ORGANIZATION AND MANAGEMENT*. (U,G) 3 hours credit. No prerequisite. Lectures, M T W Th F S 9, W 1-2:30. West Sibley 2. Associate Professor SAMPSON.

An introductory course in the field of industrial management. The course starts with the industrial revolution and deals briefly with the principles of mass production, types of business enterprise, and the location and growth of industry. Then, in somewhat more detail, are discussed the organization of the plant facilities and the plant personnel with special emphasis on the layout of the plant, types of organizational control, personnel functions, motion and time study, and wage payment systems.

Engr. 3503. *HEAT TRANSFER AND THERMAL MEASUREMENTS*. (U,G) 3 hours credit. Prerequisites, 3501, 1155. Recitations, M T W Th F 12. Computing periods, M Th 2-4:30 or T F 2-4:30. East Sibley 107. Associate Professor DROPKIN.

The fundamentals of heat transfer by conduction, convection, and radiation; heat transfer in engineering apparatus. Laboratory instruction in measurement of temperature, thermal conductivity, and film coefficients of heat transfer.

Engr. 3353. *DESIGN OF MACHINE MEMBERS*. (U,G) 3 hours credit. Prerequisite, 3351; 1154 and 1231 may be taken in parallel. Recitations, M T W Th F 11; drawing, M Th 2-4:30. East Sibley 108. Assistant Professor PHELAN.

Application of mechanics, kinematics, materials, and processes to the design and selection of machine members such as fastenings, links, springs, translation screws, belts, wire-rope, chains, couplings, clutches, brakes, gears, shafts, and bearings.

ENGINEERING MECHANICS

Engr. 1151. *MECHANICS OF ENGINEERING-STATICS*. (U) 3 hours credit. Prerequisites, Physics 115 and parallel registration in Mathematics 163. M T W Th F S 11, W 2:30-4. West Sibley 309. Mr. THURSTON.

The principles of statics of particles, chains, and rigid bodies. Equilibrium, friction, centroids, moments and products of inertia, virtual displacements, graphical methods, three dimensional trusses and frames.

Engr. 1152. *MECHANICS OF ENGINEERING—DYNAMICS*. (U) 3 hours credit. Prerequisites, 1151 and Mathematics 163. M T W Th F S 10, W 1-2:30. West Sibley 310. Mr. CAMERON.

The principles of dynamics of particles and rigid bodies. Rectilinear, curvilinear, rotational, and general plane motion of rigid bodies. Impulse-momentum, work-energy, virtual work.

Engr. 1153. *STRENGTH OF MATERIALS*. (U) 3 hours credit. Prerequisites, 1151 and parallel registration in 1152. M T W Th F S 12, W 2:30-4. West Sibley 312. Mr. TODA.

Stress and strain, tension, compression, and shear, riveted and welded joints, elementary beam theory, combined stresses, columns, strain energy, beams on several supports.

Engr. 1154. *ADVANCED STRENGTH OF MATERIALS*. (U) 3 hours credit. Prerequisite, 1155. M T W Th F S 11, W 2:30-4. West Sibley 313. Mr. CAMERON.

Strength, stiffness and stability of machine parts, disks, plates, shells, thick cylinders, straight and curved beams; principal stresses in two and three dimensions; fatigue and theories of failure.

Engr. 1155. *APPLIED MATHEMATICS*. (U) 3 hours credit. Prerequisites, 1152 and 1153. M T W Th F S 11, W 1-2:30. West Sibley 309. Mr. BUCHBINDER.

The formulation and solution of problems arising in mechanical engineering which involve the use of elementary differential equations and Fourier Series. Emphasis is placed on numerical as well as analytical methods of solution.

ENGINEERING MATERIALS

Engr. 1222. *ENGINEERING MATERIALS*. (U) 3 hours credit. Prerequisite, 1221. M T W Th F 9; S 8-10. East Sibley 110. Mr. SMALL.

An elementary lecture course in engineering materials covering corrosion, fuels and their combustion, refractories, cementing materials and concrete, wood, rubber, plastics, lubricants, and the testing and inspection of materials.

Engr. 1231. *ENGINEERING MATERIALS LABORATORY—METALS AND ALLOYS*. (U) 3 hours credit. Prerequisites, Engineering Materials 1221 and Strength of Materials 1153. May be taken simultaneously with the latter course. M Th 1-4:30. East Mechanical Laboratory. Mr. BUCHBINDER.

A course dealing with materials testing and the properties of metals and alloys.

The following types of tests with testing machines and strain measurement will be performed: tension, torsion, compression, bending, impact, fatigue, hardness, and ductility. The relation between the properties, structure, selection, inspection, and use of metals and alloys will be shown by the following experiments: carbon steels, cast irons, heat treatment, nonferrous metals and alloys, metallography, spectrography, radiography, and magnaflux.

Engr. 1232. *ENGINEERING MATERIALS LABORATORY—NONMETALLIC MATERIALS*. (U) 3 hours credit. Prerequisites, Engineering Materials 1222 and 1231. T F 1-4:30. East Mechanical Laboratory. Mr. SMALL.

A course dealing with materials testing and the properties, composition, selection, and use of the following nonmetallic materials: oils and lubricants, fuels (solid, liquid, and gaseous), plastics, wood, cementing materials, and concrete.

ENGINEERING INDUSTRIAL COOPERATIVE PROGRAM

The College of Engineering operates, for certain undergraduate students in the Schools of Mechanical and Electrical Engineering, an Engineering Industrial Co-operative Program. These students take all of the courses of the regular curricula but are not in residence when the courses of Terms 5 and 8 are regularly offered on campus.

The following courses are scheduled for the summer of 1952. One group of courses will be given in the seven weeks from June 9 to July 26; the other group in the seven weeks from July 28 to September 13.

This program is not part of the Summer Session but is included in this *Announcement* because few of these courses are offered in the Summer Session and a limited number of qualified applicants can be accommodated by this means. Refer to the *Announcement of the College of Engineering* for full course descriptions. For further information address inquiries to Professor E. M. Strong, College of Engineering, Cornell University, Ithaca, New York.

General Courses

4021. *ENGINEERING REPORTS*. Term 8. Required. Credit three hours.

Basic Electrical Engineering

4112. *ALTERNATING-CURRENT CIRCUITS*. Term 5. Required. Credit four hours.

4113. *TRANSMISSION LINES AND FILTERS*. Term 8. Required. Credit three hours.

4116. *ELECTRIC-CIRCUIT LABORATORY*. Term 5. Required. Credit three hours.

Machinery

4211. *DIRECT-CURRENT MACHINERY*. Term 5. Required. Credit three hours.

4226. *ELECTRICAL MACHINERY LABORATORY*. Term 8. Required. Credit four hours.

Industrial Electronics

4411. *ELECTRONIC CONTROL EQUIPMENT*. Term 8. Required in Industrial Electronics and Control group. Credit three hours.

Radio and Communication

4511. *RADIO AND COMMUNICATION THEORY*. Term 8. Required in Radio and Communication option. Credit three hours.

4512. *RADIO AND COMMUNICATION THEORY*. Term 8. Required in Radio and Communication group. Credit three hours.

Servomechanisms

4711. *SERVOMECHANISM I*. Term 8. Required in Industrial Electronics and Control group. Credit three hours.

Mechanics of Engineering

1152. *MECHANICS OF ENGINEERING—DYNAMICS*. Credit three hours.

Engineering Materials

1221. *ENGINEERING MATERIALS*. Credit three hours.

1223. *ENGINEERING MATERIALS*. Credit three hours.

Hydraulics

2331. *FLUID MECHANICS*. Required for students in Mechanical and Electrical Engineering. Credit three hours.

Industrial and Engineering Administration

3250. *INDUSTRIAL ACCOUNTING AND COST CONTROL*. Credit four hours.

Machine Design

3351. *MECHANISM*. Credit three hours.

Heat-Power Engineering

3501. *ENGINEERING THERMODYNAMICS*. Credit four hours.

3502. *HEAT-POWER LABORATORY*. Credit two hours.

Physics

214. *ATOM, NUCLEAR AND ELECTRON PHYSICS*. Credit three hours.

ENGLISH, SPEECH AND DRAMA

ENGLISH

Engl. 301. *AN INTRODUCTION TO WORLD DRAMA*. (U,G) 2 hours credit. M T W Th F 8. Goldwin Smith 128. Dr. PARTRIDGE.
Representative plays from Greek to recent times.

Engl. 310. *ENGLISH LITERATURE, 1600-1660*. (U,G) 2 hours credit. M T W Th F 9. Goldwin Smith 164. Assistant Professor ADAMS.

Special attention to diverse traditions of poetry in Jonson, Donne, and Marvell, and to the conflict between old and new ideas in the prose of Browne, Bacon, and Hobbes. Textbook: Coffin and Witherspoon: *Seventeenth-Century Prose and Poetry*.

Engl. 314. *FROM NEO-CLASSICISM TO ROMANTICISM*. (U,G) 2 hours credit. M T W Th F 12. Goldwin Smith 124. Associate Professor ABRAMS.

Convention and revolt in the poetry and prose of such later eighteenth-century authors as Johnson, Boswell, Goldsmith, Gray, Burns, and Blake. Textbook: Bredvold, McKillop, and Whitney: *Eighteenth-Century Poetry and Prose*.

Engl. 318. *WORDSWORTH AND COLERIDGE*. (U,G) 2 hours credit. M T W Th F 12. Goldwin Smith 128. Professor MINEKA.

Selected poems and critical prose of Wordsworth and Coleridge.

Engl. 325. *THE NINETEENTH-CENTURY ENGLISH NOVEL*. (U,G) 2 hours credit. M T W Th F 10. Goldwin Smith 128. Professor MINEKA.

Selected novels by Jane Austen, Charles Dickens, Emily Brontë, George Eliot, George Meredith, and Thomas Hardy.

Engl. 329. *AMERICAN LITERATURE TO 1860*. (U,G) 2 hours credit. M T W Th F 9. Goldwin Smith 156. Assistant Professor SHAIN.

The writings of Franklin, Edwards, Poe, Emerson, Thoreau, Hawthorne, Melville, and others, with emphasis on democratic ideals and problems.

Engl. 338. *THE TWENTIETH-CENTURY ENGLISH NOVEL*. (U,G) 2 hours credit. M T W Th F 8. Goldwin Smith 156. Dr. SESSIONS.

Selected novels by Ford Madox Ford, James Joyce, Virginia Woolf, D. H. Lawrence, Aldous Huxley, and George Orwell. This course does not duplicate English 337.

Engl. 341. *ELIZABETHAN AND JACOBEAN DRAMA*. (U,G) 2 hours credit. M T W Th F 9. Goldwin Smith 124. Associate Professor KEAST.

Forms and traditions in the English drama, 1580-1642, studied in representative plays of Marlowe, Jonson, Webster, Beaumont and Fletcher, and others.

Engl. 349. *RECENT AMERICAN POETRY*. (U,G) 2 hours credit. M T W Th F 10. Goldwin Smith 190. Professor FRENCH.

American poets of this century, including Robinson, Frost, Sandburg, Eliot, and MacLeish. Textbooks: Louis Untermeyer, *Modern American Poetry* (Mid-Century Edition); G. D. Sanders and J. H. Nelson, *Chief Modern Poets of England and America*.

Engl. 366. *CHAUCEER'S CANTERBURY TALES*. (U,G) 2 hours credit. M T W Th F 12. Goldwin Smith 164. Professor FRENCH.

A literary study of selected tales. Textbook: F. N. Robinson, *Chaucer's Complete Works*.

Engl. 370. *SHAKESPEARE'S TRAGEDIES*. (U,G) 2 hours credit. M T W Th F 11. Goldwin Smith 156. Associate Professor KEAST.

The art of Shakespeare as illustrated in six tragedies: *Julius Caesar*, *Othello*, *King Lear*, *Macbeth*, *Antony and Cleopatra*, and *Coriolanus*.

Engl. 378. *EMERSON AND WHITMAN*. (U,G) 2 hours credit. M T W Th F 11. Goldwin Smith 124. Assistant Professor SHAIN.

A study of transcendental ideas and the poetic vision of democracy.

Engl. 385. *CREATIVE WRITING*. (U,G) 2 hours credit. T Th 2-4. Goldwin Smith 236. Dr. SESSIONS.

Particular emphasis upon writing short stories and poetry. Analysis of students' writing, study of models and trends, personal conferences.

Engl. 398. *IBSEN AND SHAW*. (U,G) 2 hours credit. M T W Th F 11. Goldwin Smith 128. Assistant Professor ADAMS.

The role of a social ethic on the modern stage; a critical study in the dramatic strategies of moral debate. Textbooks: *Eleven Plays of Ibsen* (Modern Library); Shaw, *Six Plays*, *Nine Plays*.

Engl. 402. *MODERN CRITICISM AND ITS BACKGROUND*. (U,G) 2 hours credit. M T W Th F 12. Goldwin Smith 156. Associate Professor ABRAMS.

The theories, in their historical relations, of the major forms of contemporary literary criticism. There will be some practice in critical writing. Textbook: Schorer, Miles, and McKenzie, *Criticism: The Foundations of Modern Literary Judgment*.

Engl. 906. *SPECIAL TOPICS FOR INVESTIGATION*. (G) 2 hours credit. Conferences to be arranged.

For graduate students writing Masters' essays or engaging in special research. The course is administered by various members of the staff: students who wish to be put in touch with a suitable director for the work they have in mind may write to or consult Professor W. H. FRENCH.

SPEECH AND DRAMA

Sp.&Dr. 101. *PUBLIC SPEAKING*. (U) 2 hours credit. M T W Th F 11. Goldwin Smith 26. Professor WICHELNS.

Practice in speechmaking on topics of current interest. Methods of preparation and delivery studied in relation to practice; class discussion; conferences. Regular students passing the course are admitted to Speech and Drama 102 and 213. Textbook: Soper's *Basic Public Speaking*.

Sp.&Dr. 131. *VOICE TRAINING*. (U,G) 2 hours credit. M T W Th F 8. Goldwin Smith 24. Professor THOMAS.

An elementary course for the improvement of the speaking voice. Individual and group practice in the overcoming of such faults as nasality, weak quality, and indistinctness. Attention to the principles of voice production. Text: Anderson's *Training the Speaking Voice*.

Sp.&Dr. 205. *CONFERENCE METHODS AND GROUP DISCUSSION*. (U,G) 2 hours credit. M T W Th F 9. Goldwin Smith 26. Assistant Professor ARNOLD.

Introduction to the principles of group thinking with special attention to problem solving and decision making through conference methods. Readings; lectures; practice in informal and committee discussions, in committee hearings, and in the dissemination of information through conference procedures. Textbook: Wagner and Arnold's *Handbook of Group Discussion*.

Sp.&Dr. 231. *SPEECH FOR THE CLASSROOM TEACHER*. (U,G) 2 hours credit. M T W Th F 11. Goldwin Smith 21. Assistant Professor ARNOLD.

Study and practice of speech skills especially important to teachers at all levels of instruction. Readings; lectures; practice in pronunciation, exposition, reading aloud, lecturing, and leading discussions.

Sp.&Dr. 287. *THEORIES OF PUBLIC ADDRESS*. (U,G) 2 hours credit. M T W Th F 10. Goldwin Smith 134. Professor WICHELNS.

A survey of theories, ancient and modern, concerning the function and the types of public address, the nature of persuasion, and the problems of preparation, style, and delivery. Lectures, readings, and reports.

Sp.&Dr. 290. *THESES AND SPECIAL PROBLEMS IN PUBLIC ADDRESS*. (G) 2 or more hours credit. Professor WICHELNS.

Required of regularly registered summer session graduates working on theses. Open to other graduates prepared for independent study of special topics in rhetoric and public speaking.

Sp.&Dr. 333. *TEACHERS' COURSE IN PHONETICS AND SPEECH TRAINING*. (U,G) 2 hours credit. M T W Th F 9. Goldwin Smith 21. Professor THOMAS.

A study of English phonetics, pronunciation, and the improvement of speech; primarily for secondary and elementary school teachers. Text: Thomas' *Introduction to Phonetics of American English*.

Sp.&Dr. 390. *THESES AND SPECIAL PROBLEMS IN SPEECH TRAINING AND PHONETICS*. (G) 2 or more hours credit. Professor THOMAS.

Required of regularly registered summer session graduates working on theses. Open to other graduates prepared for the independent study of special topics in speech training and phonetics.

Sp.&Dr. 401. *DRAMATIC PRODUCTION: DIRECTION*. (U,G) 2 hours credit. M T W Th F 10. Morse, Stage Laboratory. Associate Professor ALBRIGHT.

For upperclassmen and graduates. Theory of stage direction; fundamentals of theatrical mounting; survey of practical phases of production. Prerequisite for further work in dramatic production. Textbook: Dolman's *Art of Play Production*.

Sp.&Dr. 411. *THEATRE FOR CHILDREN*. (U,G) 2 hours credit. M T W Th F 9. Morse, Stage Laboratory. Miss SHARON.

A survey of dramatic production for and by children, covering play selection, directing and production techniques, and problems of audience relationships. Some demonstrations will be included.

Sp.&Dr. 421. *DRAMATIC INTERPRETATION AND ACTING*. (U,G) 2 hours credit. M W F 2-4. Goldwin Smith 24. Associate Professor ALBRIGHT.

A practice course in oral interpretation, pantomime, acting, and group rehearsal. Text: Albright's *Working Up a Part*.

Sp.&Dr. 433. *THEATRE PRACTICE*. (U,G) 2 or 4 hours credit. Hours to be arranged. Mr. FLEMMING and the Theatre staff.

Technical practice coordinated with the regular productions of the Summer Theatre; readings in the techniques involved.

Sp.&Dr. 475. *INTRODUCTION TO MODERN THEORIES OF DRAMATIC PRODUCTION*. (U,G) 2 hours credit. M W F 2-3:30. Goldwin Smith 128. Professor DRUMMOND.

Principles of theatrical presentation, with special attention to the development of modern theatre art and criticism. Lectures, readings, and reports. Textbook: Gorelik's *New Theatres for Old*.

*Sp.&Dr. 480. *THE MOTION PICTURE: A SURVEY*. (U,G) 2 hours credit. M T W Th F 12. Morse, Stage Laboratory. Associate Professor STANTON.

The development of the motion picture as a modern art. Characteristic problems and devices of the art; economic and social aspects; the documentary film; the educational film. Numerous films will be viewed. Students are required to attend the film programs of the Summer Theatre. Fee, \$3.

Sp.&Dr. 490. *THESES AND SPECIAL PROBLEMS IN DRAMA AND THE THEATRE*. (G) 2 or more hours credit. Professors DRUMMOND, STANTON, and ALBRIGHT.

Required of regularly registered Summer Session graduates working on theses. Open to other graduates prepared for the independent study of special topics in drama and the theatre.

SPEECH CLINIC. For students working under the direction of the department. Professor THOMAS. By appointment. No credit.

Students may elect a major and/or minor with emphasis on (1) Public Address, (2) Phonetics and Speech Training, (3) Drama and the Theatre. For students planning a program of graduate studies in successive summers, advanced courses in each of these three areas are offered in alternating sessions, and special provision is made for directed independent study.

FINE ARTS

ART: HISTORY AND APPRECIATION

Art 102. **INTRODUCTION TO RENAISSANCE AND MODERN ART.** (U,G) 2 hours credit. Lectures, M T W Th F 12. Goldwin Smith Museum. Professor WAAGE.

The relationship of art to society in Western Europe from 1400 to the present, as exemplified in the works of the major painters and sculptors.

Art 507. **TWENTIETH CENTURY ART.** (U,G) 2 hours credit. Lectures, M T W Th F 10. Goldwin Smith 35. Professor WAAGE.

The consequences of the divorce of painting and sculpture from social function; painters' painting and expressionism; individualistic and clique vagaries; attempts toward reintegration.

PAINTING AND SCULPTURE

Arch. 300. **PAINTING AND COMPOSITION.** (U,G) 2 hours credit. Morse 101. M T W Th F 8-10. Associate Professor DALY.

A studio course dealing with the fundamentals of painting. In the study of some of the principal considerations of modern art, the classroom assignments progress from simple to more complex pictorial organizations. Though not an elementary presentation, the course has no prerequisites and is open to both beginners and intermediate students. Media: tempera and casein.

Arch. 309. **PAINTING AND COMPOSITION.** (U,G) 2 to 6 hours credit. M T W Th F 10-12. Registration by permission of the instructor. May be repeated for credit. Morse 120. Associate Professor DALY.

Arch. 324. **WORKSHOP FOR THE ART TEACHER.** (G) 2 hours credit. M T W Th F 10-12. Room to be assigned. Associate Professor DALY.

Combined seminar and studio course. Problems of materials and methods for teaching art in primary and secondary schools; for those who have art teaching experience as well as those who are teaching art in the primary grades for the first time. Individual needs are considered, and opportunity for discussion is provided. Part of the course is given to planning art curricula and to methods of presentation and emphasis.

Arch. 330. **SCULPTURE.** (U,G) 2 hours credit. M T W Th F 2-4. Morse B101. Mr. SQUIER.

A study of the principles of sculptural organization as related to the material being presented and the medium being used. Modeling, casting, and carving.

Arch. 339. *SCULPTURE*. (U,G) 2 to 6 hours credit. M T W Th F 2-4. Registration by permission of instructor. May be repeated for credit. Morse B101. Mr. SQUIER.

A course for students with considerable experience in sculpture. Problems will be selected according to the needs of the student who will work independently under regular criticism.

MUSIC

Music 101. *THE ART OF MUSIC*. (U) 2 hours credit. M T W Th F 11. Music Bldg. 6. Associate Professor AUSTIN.

An approach to the understanding and rational enjoyment of the art of music, offered especially for students who have had no technical training in the subject. Most of the outside work consists of listening to phonograph records.

Music 377. *SEMINAR IN MUSICOLOGY*. (G) Credit and hours to be arranged after consultation. Prerequisites, a knowledge of music theory and general music history and some skill in applied music and score reading; also (depending on the topic chosen) a reading knowledge of the requisite foreign language or languages. A particular topic of study will be assigned to each student after consultation. Music Bldg. 7. Associate Professor AUSTIN.

Music 021. *INFORMAL STUDY*. (U) Credit and time to be arranged after consultation. Mr. BEAVEN.

Music 031. *INFORMAL STUDY*. (G) Credit and time to be arranged after consultation. Associate Professor AUSTIN.

*Music 401. *ORGAN*. (U) 1 hour credit (this credit may be counted toward a Cornell degree only by those students who have at least two hours' credit in theoretical or historical music courses). Prerequisite, consent of the instructor. Hours to be arranged. Mr. BEAVEN.

For two half-hour lessons weekly throughout the Summer Session, a special fee of \$30 is charged. Fee payable at the office of the Department of Music at time of registration with the instructor.

SAGE CHAPEL CHOIR. All men and women interested in singing in the Sunday Chapel services may report to Mr. BEAVEN at 7 P.M. on July 7, in the choir loft of Sage Chapel, for discussion of plans and decision on a suitable schedule of rehearsals.

HOME ECONOMICS

CHILD DEVELOPMENT AND FAMILY RELATIONSHIPS

*C.D.&F.R. 140. *CREATIVE PLAY IN CHILDHOOD*. (U,G) 2 hours credit. M T W Th F 10. Van Rensselaer G-60E. Associate Professor REEVES.

An exploration of the meaning of play to the developing child. Consideration of the play environment as a source of self-discovery and self-realization. Observation of children in a variety of play situations. Evaluation of play materials and equipment in the light of child use. Fee, \$2.

*C.D.&F.R. 310. *PRINCIPLES FOR CHILD GUIDANCE*. (G) (U by permission) 2 hours credit. No prerequisite, but a basic course in child psychology is desirable. M T W Th F 8. Van Rensselaer 124. Nursery School observations,

3 hours a week, to be arranged with the instructor during registration. Professor WARING.

The behavior of young children and the influence of adults upon their learnings will be observed and studied as a basis for developing principles of guidance. Observations, to include typical activities, will be scheduled at different hours of the day. Fee, \$2.

*C.D.&F.R. 317. *SOCIAL AND EMOTIONAL DEVELOPMENT OF THE CHILD.* (U,G) 2 hours credit. M T W Th F 9. Van Rensselaer 124. Professor DALTON.

Understanding the psychological growth and development of the child from birth through adolescence. Emphasis will be placed upon social and emotional development. The place of maturation in growth will be briefly considered. Fee, \$2.

*C.D.&F.R. 330. *PARTICIPATION IN THE NURSERY SCHOOL.* (U,G) 2 hours credit. Number of students limited. Permission of the instructor required. Open to home economics teachers and others with qualifications satisfactory to the instructor. Eight laboratory hours in blocks of two, three, or four morning hours (8:30-12:30). Discussions, T Th 2. Nursery School. Assistant Professor LANDSBERGER.

Opportunity for experience with a group of children in the nursery school teaching program. Readings and discussions supplement the participation experience in giving students an understanding of young children and of themselves in relationships with children. Fee, \$2.

*C.D.&F.R. 341. *CREATIVE DRAMATICS FOR CHILDREN.* (G) (U by permission) 2 hours credit. Limited to twenty students. M T W Th 11-12:30. Van Rensselaer NB-19. Miss SHARON.

Orientation to the field of drama for children. Creative playmaking will be considered as a means of approaching drama for children in the school, community, and children's theatre. Emphasis on the creative growth of the child through participation in dramatics and on the contribution of creative playmaking to a dynamic understanding of behavior. Improvisation, music, sound, and stage properties will be used to develop observation, evoke emotional reactions, and stimulate imagination. Fee, \$5.

Three laboratories will be provided in the session, one with students and two with children. Summer session families wishing to enroll children in either age group (8-9 or 10-11) are requested to write Katherine Reeves, Department of Child Development and Family Relationships, by June 1, 1952, for information and application blanks.

*C.D.&F.R. 351. *CHILDREN'S LITERATURE.* (U,G) 2 hours credit. M T W Th F 9. Van Rensselaer 121. Associate Professor REEVES.

Literature as a resource in children's living. The relation of children's literature to world literature. Traditional and modern forms. Illustration in children's books. Reading interests of children two to twelve. Fee, \$5.

*C.D.&F.R. 360. *PSYCHODYNAMICS OF HUMAN BEHAVIOR.* (U,G) 2 hours credit. M T W Th F 11. Van Rensselaer 121. Professor DALTON.

A study of the motivating forces in human behavior. Both conscious and unconscious processes directing behavior will be considered. Special attention will be given to the teacher's task of dealing with personality problems of pupils. Fee, \$2.

C.D.&F.R. 405. *SEMINAR IN RESEARCH METHODS.* (G with permission) 2 hours credit. T Th 2-4:30. Van Rensselaer G-60E. Associate Professor DEVREUX.

This seminar will review the principal methods and techniques relevant to research in child development and family relationships.

C.D.&F.R. 407. *INDIVIDUAL RESEARCH IN CHILD DEVELOPMENT AND FAMILY RELATIONSHIPS*. (G) 1 to 6 hours credit. Registration by permission of the instructor; hours by arrangement. Professor WARING.

This is planned for students who are ready to undertake their own research and theses.

*C.D.&F.R. 461. *DYNAMICS OF FAMILY INTERACTION*. (G) 2 hours credit. M T W Th F 8. Van Rensselaer 3M11. Associate Professor POPE.

The framework within which the dynamics of family interaction will be considered is the interrelations of the male and the female, of the younger, middle, and older generations, and of the child's own generation, siblings and peer group, at successive stages of the family cycle. As background for this approach, brief consideration is given to the cultural milieu in which the contemporary American family has its being. Fee, \$2.

R.S. 137. *ADJUSTMENT IN THE MIDDLE AND LATER YEARS*. (U,G) 2 hours credit. M T W Th F 10. Van Rensselaer 121. Professor ROCKWOOD and Associate Professor TAIETZ.

This course considers the adjustment in the middle and later years as a process of biological, psychological, and social change. Emphasis will be placed upon changes in role and status, marital and family relationships, living arrangements, and employment. The provisions, public and private, which have been developed to meet the aged person's economic, social, psychological, medical, recreational, educational, and housing needs will be described and evaluated.

ECONOMICS OF THE HOUSEHOLD AND HOUSEHOLD MANAGEMENT

*Ec.Hs. 260. *PROBLEMS IN PROVIDING CONSUMERS' GOODS*. (G) 2 hours credit. M T W Th F 10. Van Rensselaer 301. Miss KLITZKE.

The contribution of an efficient marketing system to the level of consumption of our people. The kinds of markets, and the quantity, quality, and variety of supplies available. Effects of practices of consumers and of middlemen on prices. Problems in standardization of goods. Present and possible contributions of the government, business associations, and private organizations in improving marketing practices. Fee, \$2.

*Ec.Hs. 310. *MANAGEMENT IN FAMILY LIVING*. (G) 2 hours credit. Discussion, group projects, and field trips, T Th 2-5. Van Rensselaer G-19. Miss SNOWMAN.

A study of the ways in which different families manage with their available resources to attain their purposes. An opportunity to work with family members in their homes on a solution of some of their management problems. Simplification of work as one means of managing. Demonstrations, motion pictures, slides, photographs, and work centers set up in the laboratory. Opportunity for preparing illustrative material. One all-day tour, time to be arranged. Fee, \$6.

*Ec.Hs. 320. *MANAGEMENT IN RELATION TO HOUSEHOLD EQUIPMENT*. (G) 2 hours credit. M 2, W F 2-4, and two hours for laboratory practice to be arranged at the student's convenience. Van Rensselaer G-19. Professor WILLIAMSON.

Selection, use, care, and repair of household equipment in relation to individual situations. Relative advantages of various types of equipment in perform-

ing certain tasks. Discussions with homemakers, manufacturers, distributors, and engineers. Trips to homes and retail stores. Selection and use of home appliances in school situations. Fee, \$3.

*Ec.Hs. 403. *SPECIAL PROBLEMS IN ECONOMICS OF THE HOUSEHOLD AND HOUSEHOLD MANAGEMENT*. (G) Credit and hours to be arranged. Registration by permission. Staff of the Department.

For graduate students recommended by their chairmen and approved by the head of the department and the instructor in charge for independent, advanced work. Fee will be dependent on the nature of the problem.

*Ec.Hs. 407. *THESIS AND RESEARCH IN ECONOMICS OF THE HOUSEHOLD AND HOUSEHOLD MANAGEMENT*. (G) Credit and hours to be arranged. Registration with permission of the instructor. Staff of the Department.

Fee will be dependent on the nature of the problem.

*Ec.Hs. 430. *ECONOMIC CONDITIONS IN RELATION TO THE WELFARE OF FAMILIES*. (G) 2 hours credit. M T W Th F 12. Van Rensselaer 121. Professor ROLLINS.

The relationship between the economic welfare of families and the total amount of goods and services produced, the distribution of income, and the general level of prices. Influence of such institutions as specialization, industrialization, money, marketing, and taxation. The interrelationship between outside economic conditions and economic activities in the home. Fee, \$1.

FOOD AND NUTRITION

*F.&Ntr. 250 *HOME PRESERVATION OF FOOD*. (U,G) 2 hours credit. Prerequisite, college courses in chemistry and food preparation. Lecture and discussion, M W F 2, Van Rensselaer 301; laboratory, T Th 2-4, Van Rensselaer 361. Assistant Professors DOREMUS and DUNN.

The first three weeks will be devoted to basic principles involved in the home freezing of foods and the second three weeks to basic principles involved in canning. Fee, \$12.

(Note: A student interested in only one of the three-week units should enroll in Food and Nutrition 250u.)

*F.&Ntr. 250u. *HOME PRESERVATION OF FOOD*. (U,G) 1 hour credit. Prerequisite, college courses in chemistry and food preparation. Lecture and discussion, M W F 2, Van Rensselaer 301; laboratory, T Th 2-4, Van Rensselaer 361. Assistant Professors DOREMUS and DUNN.

This unit course is offered in conjunction with Food and Nutrition 250. It is planned for those who wish work in either freezing or canning but not both. The unit on home freezing will be offered from July 7 to July 26, the unit on canning from July 28 to August 16. Fee, \$6.

*F.&Ntr. 305. *TECHNIQUES AND PRINCIPLES OF DEMONSTRATION*. (U,G) 2 hours credit. Discussion and laboratory, M T W Th F 11-1. Van Rensselaer 352. Associate Professor FOSTER.

A course emphasizing the purposes and techniques of demonstrations in food preparation and nutrition as used in teaching, extension, business, and social service. Each student is expected to prepare and give several demonstrations. Text: Allgood, *Demonstration Techniques*. Fee, \$12.

*F.&Ntr. 313. *SCIENCE RELATED TO FOOD*. (G) (U by permission) 2 hours credit. Prerequisites, courses in chemistry and in food preparation satisfactory to the instructor. Lecture, M W F 10, Van Rensselaer 339; laboratory, T Th 10-1, Van Rensselaer 356. Associate Professor LONGREE.

Foods as colloidal systems; gels and sols. Physical and chemical properties of proteins and carbohydrates as thickening agents.

Laboratory work will include comparison of the effects of different methods of preparation and cooking on protein foods as eggs, fish, meat, cheese, and milk; and of varying manipulation, ingredients, and cooking conditions on cereal products, including cream soups, sauces, and starch-thickened desserts. Text: Lowe, *Experimental Cookery* (third ed.). Fee, \$12.

(Courses 311, 312, and 313 will be offered in consecutive years. These three courses make a six-hour unit in Science Related to Food.)

*F.&Ntr. 329. *RECENT FINDINGS IN NUTRITION*. (U,G) 2 hours credit. Prerequisite, a college course in nutrition and consent of the instructor. M T W Th F 9. Van Rensselaer 339. Professor STEININGER.

Planned for students who wish to bring their information about nutrition up-to-date. The topics studied will be those which are related to practical problems in human nutrition. Emphasis on proteins and minerals. Fee, \$2.

(Course 328, with emphasis on energy metabolism and vitamins, will be offered in alternate years.)

*F.&Ntr. 330. *DIET THERAPY*. (U,G) 2 hours credit. Prerequisites, a college course in normal nutrition, biochemistry, and physiology. M T W Th F 9. Van Rensselaer 426. Assistant Professor HORN.

Diet in diseases such as fever, gastrointestinal disturbances, and diabetes. Experience in independent use of journal literature in this field. The course is planned to meet the "Diet in Disease" requirement of the American Dietetics Association for students who plan to take a hospital internship. Fee, \$1.

*F.&Ntr. 402. *READINGS IN NUTRITION*. (G) 2 hours credit. Registration by permission of the instructor. Students are expected to have some background in physiology, organic chemistry or biochemistry, and nutrition. M T W Th F 8. Van Rensselaer 301. Assistant Professor STEELE.

A critical review of current literature, emphasizing the experimental data on which the principles of human nutrition are based. Students participate in the choice of subjects for study. Fee, \$1.

*F.&Ntr. 403. *SPECIAL PROBLEMS FOR GRADUATE STUDENTS*. (G) Credit and hours to be arranged. Registration with permission of the instructor. Professor STEININGER and Department staff.

For graduate students recommended by their chairmen and approved by the head of the department and the instructor in charge for independent, advanced work. Fee will be dependent on the nature of the problem.

*F.&Ntr. 407. *THESIS AND RESEARCH*. (G) Credit and hours to be arranged. Registration with permission of the instructor. Professor STEININGER and Department staff.

Fee will be dependent on the nature of the problem.

HOME ECONOMICS EDUCATION

See Education, page 32.

HOUSING AND DESIGN

*H.&Des. 302. *COLOR AND DESIGN*. (U,G) 2 hours credit. M T W Th F 8-10. Van Rensselaer 322. Assistant Professor STRAIGHT.

A basic course in the study of the elements and principles of design and color, with laboratory problems and experiments and assigned readings. Fee, \$10.

*H.&Des. 310. *STUDY OF ROOMS, SELECTION AND ARRANGEMENT OF FURNISHINGS*. (U,G) 2 hours credit. No prerequisite, but previous study of color and design is desirable. M T W Th F 2-4. Van Rensselaer 408. Associate Professor NEBLETT.

A study of functional arrangement and design in furnishings. The selection and arrangement of furnishings in relation to family needs; the relation of furnishings to the architectural features of rooms. Fee, \$10.

*H.&Des. 321. *INTERIOR DESIGN: THEORY AND PRACTICE*. (U,G) 2 hours credit. M T W Th F 10-12. Van Rensselaer 408. Associate Professor NEBLETT.

Advanced problems in design and techniques integrated toward a class problem in the complete development of a room. Fee, \$10.

*H.&Des. 347. *CHOOSING THE HOUSE AND THE NEIGHBORHOOD*. (U,G) 2 hours credit. M T W Th F 10-11. Van Rensselaer 3 M 11. Associate Professor MONTGOMERY.

Examination of the major issues involved in acquiring a house: (1) guides to securing shelter—whether to own or rent, and how to choose a house and neighborhood; (2) the roles and practices of those concerned with providing houses—the architect, banker, labor, materials supplier, contractor, merchant builder, prefabricator, real estate agent, and government. Fee, \$5.

*H.&Des. 403. *SPECIAL PROBLEMS FOR GRADUATE STUDENTS*. (G) Credit and hours to be arranged. Department staff.

For graduate students recommended by their chairmen and approved by the head of the department and the instructor in charge for independent, advanced work. Fee will be dependent on the nature of the problem.

*H.&Des. 407. *THESIS AND RESEARCH*. (G) Credit to be arranged. Registration with permission of instructor. Department staff.

Fee will be dependent on the nature of the problem.

*H.&Des. 442. *HOUSE REMODELING*. (G) 2 hours credit. Prerequisite, college courses in house planning and/or adequate experience. M T W Th F 8-10. Van Rensselaer 327. Associate Professor LOPER.

This course is focused particularly to extension housing specialists and others who are in professional positions demanding special knowledge of house remodeling in their work with families. It deals with remodeling possibilities in accordance with family needs, present plan of house, space available, structural limitations, and design principles. Drafting room work, lectures, discussions, field trips, and outside reading. Fee, \$10.

INSTITUTION MANAGEMENT

*I.Mgt. 220. *FOOD SELECTION AND PURCHASE*. (U,G) 2 hours credit. Prerequisite, college courses in nutrition and food preparation. Lecture, discussion, and laboratory M W F 10 and T Th 10-12. Van Rensselaer G62. Assistant Professor MOORE.

Planned for dietitians, homemaking teachers, and others who have responsibility for purchasing food. Topics include sources, bases of selection, purchasing practices, specific market information and care of various classes of food. One out-of-town field trip will be scheduled if possible. Estimated cost of trip, \$4. Fee, \$2.

*I.Mgt. 230. *QUANTITY COOKERY*. (U,G) 2 hours credit. Prerequisite, college courses in food preparation and nutrition or equivalent experience. Lecture, T Th 2-3; laboratory, M W F 2-5:30. Van Rensselaer G62 and Cafeteria kitchen. Assistant Professor MOORE.

Lectures and discussions include underlying principles and basic procedures in quantity food preparation in relation to quality, quantity, and cost control. The findings and applications of research in these areas will be reviewed. Laboratories give practice in food production, the use of institution equipment, and recipe costing in each department of the Home Economics Cafeteria kitchen where food is prepared for approximately 2,000 persons daily. Fee, \$12.

*I.Mgt. 320. *FOOD SERVICE ORGANIZATION AND ADMINISTRATION*. (U,G) 2 hours credit. Prerequisite, a college course in some aspect of food administration or equivalent experience. Lecture and discussions, M W F 11-12:30 and T 3-5. Van Rensselaer 3M11. Associate Professor PROUD.

The course is designed primarily for undergraduate and graduate students who are preparing for the field of managerial dietetics or food administration and partially fulfills the requirements of the American Dietetic Association. Emphasis is on food service organization, operational problems and procedures, kitchen planning, and the selection of equipment. Fee, \$2.

I.Mgt. 400. *FIELD TRIPS*. (G) 1 hour credit. Registration with permission of the instructor. Prerequisite, a college course in some aspect of food administration or equivalent experience. Th 3-5:30. Van Rensselaer G62. Two all-day out-of-town trips and two additional 2½ hour local trips to be scheduled. Tentative dates for out-of-town trips July 11 and 26. Associate Professor PROUD and Assistant Professor MOORE.

Visits to food service establishments in the community and in Rochester and Syracuse. Estimated cost of trips, \$12.

*I.Mgt. 403. *SPECIAL PROBLEMS FOR GRADUATE STUDENTS*. (G) Credit and hours to be arranged. Registration with permission of the instructor. Professor HARRIS and department staff.

For graduate students recommended by their chairmen and approved by the head of the department and the instructor in charge for independent, advanced work. Fee will be dependent on the nature of the problem.

*I.Mgt. 407. *THESIS AND RESEARCH*. (G) Credit and hours to be arranged. Registration with permission of the instructor. Professor HARRIS and Associate Professor LONGREE.

Fee will be dependent on the nature of the problem.

*I.Mgt. 430. *SPECIAL PROBLEMS IN EXPERIMENTAL QUANTITY COOKERY*. (G) 1 hour credit. Prerequisite, a college course in quantity cookery.

Registration by permission of the instructor. Lecture, F 2, Van Rensselaer G-1; laboratory, W 2-5:30, Van Rensselaer 172. Associate Professor LONGREE.

Selected topics will be suggested from which students may choose problems for special study and experimentation. All projects will deal with problems peculiar to foods prepared in quantity. Fee, \$5.

TEXTILES AND CLOTHING

*T.&Clo. 130. *TEXTILES: CLOTHING FABRICS*. (U) (G by permission of instructor) 2 hours credit. M T W Th F 2-4. Van Rensselaer 278. Assistant Professor WHITE.

A study of textile fibers and their identification through laboratory tests; technical information and laboratory practice to develop good buying habits and to encourage proper use and care of fabrics and clothing; consideration of some of the factors involved in the production and consumption of textiles; the study of clothing fabrics in the present-day market as a means of developing aesthetic appreciation of quality and design. Textbook: Woolman and McGowan, *Textiles*. Estimated cost of materials, \$3. Fee, \$5.

*T.&Clo. 110. *FITTING AND PATTERN MAKING*. (G) (U by permission of instructor) 2 hours credit. Prerequisite: professional experience or course work in the area of clothing design and construction. M T W Th F 2-4. Van Rensselaer 234. Assistant Professor ADAM.

A course planned primarily for teachers to give a background of pattern making as it relates to pattern alteration and fitting.

Laboratory problems include fitting a basic pattern; practice in pattern making; the making of two garments, one of which is carried through to completion. Materials to be provided by the students at an estimated cost of \$15-\$35. Fee, \$5. Textbook: Harriet Pepin, *Modern Pattern Design*.

*T.&Clo. 210. *DRESS SELECTION AND DESIGN*. (G) (U by permission of instructor) 2 hours credit. M T W Th F 10-12. Van Rensselaer 216. Assistant Professor LEAR.

A course planned to give opportunity for creative experience and to help develop appreciation of fine design and skill in achieving beauty of costume in relation to the wearer.

Laboratory practice includes the study of design problems; experimentation with fabric and color combinations; experience in the use of source material as inspiration for designing clothes; other problems adapted to the needs and interests of the students. Textbook: Grace Margaret Morton, *The Arts of Costume and Personal Appearance*. Materials to be provided by the students at an estimated cost of \$5. Fee, \$5.

*T.&Clo. 220. *TECHNIQUES CONCERNED WITH PERSONAL APPEARANCE*. (U,G) 2 hours credit. M T W Th F 8-10. Van Rensselaer 213. Associate Professor BUTT.

This course will consist of demonstrations, discussions, and laboratory practice in selecting appropriate clothes and in personal grooming techniques from the point of view of age, coloring, figure, and expression of individuality. Making and testing various types of cosmetics. Evaluation of subject matter and teaching aids available in this area. Fee, \$5.

*T.&Clo. 225. *CARE AND RENOVATION OF CLOTHING*. (U,G) 2 hours credit. M T W Th F 11-1. Van Rensselaer 215. Associate Professor BUTT.

A study of processes, equipment, and supplies involved in the care and renovation of clothes for the family.

Laboratory problems will include practice in mending woven and knitted fabrics; renovation of hats, furs, and leathers; spotting, cleaning, and pressing garments. Students should provide themselves with materials to work on. Fee, \$5.

*T.&Clo. 345. *TAILORING*. (G) (U by permission of instructor) 2 hours credit. M T W Th F 8-10. Van Rensselaer 234. Prerequisite: accredited college courses in elementary and advanced dressmaking acceptable to the instructor. Registration limited to 16 students. Assistant Professor ADAM.

An advanced course planned for the teacher or the student with broad clothing experience and skill in all types of garment construction.

Laboratory problems will include the making of a coat or suit with emphasis on the techniques of tailoring as they apply to construction problems in dressmaking. Materials to be provided by students at an estimated cost of \$25-\$50. Fee, \$5.

*T.&Clo. 350. *TEXTILES: ADVANCED COURSE*. (G) 2 hours credit. Prerequisite: Textiles and Clothing 130 or the equivalent. Consult instructor before registering. Registration limited to 12 students. M T W Th F 8-10. Van Rensselaer 278. Assistant Professor WHITE.

A study of textiles with emphasis on physical properties of fiber, yarn, and fabrics as they affect satisfactions to be obtained by the consumer. Sources of textile information. Practice in the use of laboratory equipment and instruments. Standard procedures are used where possible. Development of a special problem by the student to meet individual interests. Estimated cost of materials, \$5-\$15. Fee, \$5.

*T.&Clo. 403. *SPECIAL PROBLEMS IN TEXTILES AND CLOTHING*. (G) Credit and hours as arranged. Registration by permission of Associate Professor McMURRY.

For graduate students recommended by their chairmen and approved by the department head. Students to assume any expense involved unless otherwise previously arranged. Fee will be dependent on the nature of the problem.

*T.&Clo. 407. *THESES AND RESEARCH*. (G) Credit and hours as arranged. Registration by permission of Associate Professor McMURRY.

Fee will be dependent on the nature of the problem.

HOTEL ADMINISTRATION

In 1922 Cornell University established, with the cooperation and financial assistance of the American Hotel Association, a four-year course in Hotel Administration for high school graduates desiring to enter the administrative departments of the hotel business. Many hotel proprietors and managers who have been unable to take a four-year university course have asked for shorter courses with less formal entrance requirements.

To meet this demand, the Summer Session work in hotel administration is given in unit courses, one to three weeks in length. A circular giving full details of these courses has been issued and will be sent upon request. For this circular, for other information about the work in this department, and for admission to these courses, address Professor H. B. Meek, Statler Hall, Cornell University, Ithaca, New York.

INDUSTRIAL AND LABOR RELATIONS

I.&L.R. 293. *SURVEY OF INDUSTRIAL AND LABOR RELATIONS*. (U) 2 hours credit. M T W Th F 9. I.&L.R. Bldg. 22. Assistant Professor MACINTYRE.

A survey for students in other divisions of the University. The course will include an analysis of the major problems in industrial and labor relations: labor union history, organization, and operation; labor market analysis and employment practices; industrial and labor legislation and social security; personnel management and human relations in industry; collective bargaining; mediation and arbitration; the rights and responsibilities of employers and employees; the major governmental agencies concerned with industrial and labor relations.

I.&L.R. 300. *LABOR RELATIONS LAW AND LEGISLATION*. (U) 2 hours credit. M T W Th F 8. I.&L.R. Bldg. 23. Professor JENSEN.

A study of the common law and legislation relating to labor relations on both federal and state levels. The antitrust laws as they affect labor relations, the Norris-LaGuardia Act, the Wagner Act, the Taft-Hartley Act, and the more recent legislative proposals and enactments will receive special consideration. Decisions of courts and labor relations boards will be studied and discussed.

I.&L.R. 363. *WAGE AND SALARY ADMINISTRATION I*. (U,G) 2 hours credit. Prerequisite, personnel administration. M T W Th F 11. I.&L.R. Bldg. 17. Assistant Professor GORDON.

The place and function of wage and salary administration in personnel administration. The course will include a review of job analysis, job description, and job evaluation. Major emphasis will be given to the administration of a wage and salary program, including development and implementation of policies, rate structures, elimination of inequities, appraisal of current practices, use of surveys, job standardization, merit rating and seniority, exempt and nonexempt jobs under Fair Labor Standards Acts.

I.&L.R. 392. *AUDIO-VISUAL METHODS*. (U,G) 2 hours credit. Section 1: M T W Th F 9, I.&L.R. Bldg. 14. Section 2: M T W Th F 11, I.&L.R. Bldg. 14. Assistant Professor JEHRING.

A discussion of the effectiveness of audio-visual methods as a means of communication. Training in the preparation and proper use of audio-visual materials and the methods of operation of various kinds of audio-visual devices. Stress is placed on the contributions of audio-visual methods to the solution of problems of mass communication.

I.&L.R. 490. *PUBLIC RELATIONS*. (U,G) 2 hours credit. M T W Th F 10. I.&L.R. Bldg. 22. Professor HODGES.

Development of public relations thinking and activities of American industry and labor; analyses of specific public relations problems and programs, e.g., relations of industry with communities, personnel, stockholders, customers, government, the general public; and relations of labor with union members, potential members, and management. Students will make case studies, organize public relations programs, and interpret them for communication via various media.

I.&L.R. 500. *COLLECTIVE BARGAINING, MEDIATION, AND ARBITRATION*. (G) 2 hours credit. M T W Th F 10. I.&L.R. Bldg. 23. Professor JENSEN.

A comprehensive study of collective bargaining with special emphasis being given to legislation pertinent to collective bargaining activities as well as to the techniques and procedures of bargaining and to the important substantive issues that come up in negotiation and administration of the collective agreement. At-

tention will also be given to problems of handling and settling industrial controversy.

I.&L.R. 510. *ECONOMIC AND SOCIAL STATISTICS*. (G) 3 hours credit. M T W Th F 8. I.&L.R. Bldg. 22. Laboratory sessions M W, 1-3, I.&L.R. Bldg. 10B. Professor McCARTHY.

For graduate students who have not taken a course in statistics or who wish to take a refresher course. Emphasis will be placed on discussion of technical aspects of statistical analysis and on initiative in selecting and applying statistical methods to research problems. The subjects ordinarily covered will include analysis of frequency distribution, time series (including index numbers), regression and correlation analysis, and selected topics from the area of statistical inference.

I.&L.R. 520. *HUMAN RELATIONS*. (G) 2 hours credit. M T W Th F 11. I.&L.R. Bldg. 10A. Professor McCONNELL.

For graduate students who have had little or no formal training in human relations. The course will be intensive and will review the principal areas of human relations in industry.

I.&L.R. 560. *PERSONNEL ADMINISTRATION*. (G) 2 hours credit. M T W Th F 10. I.&L.R. Bldg. 17. Assistant Professor GORDON.

A basic graduate course covering the major areas of personnel administration. Emphasis will be placed on the staff and service functions including relationship of personnel to other operations; functions of the personnel administrator; organization of the personnel functions; personnel policies; communication; recruitment, selection and placement; promotion and transfer; job analysis; service ratings; training; hours and wages; morale, safety, and health; employee services; and personnel research. Extensive readings from the literature in the field, problems, case studies, and discussions.

I.&L.R. 570. *EMPLOYEE PROTECTION AND INCOME SECURITY*. (G) 2 hours credit. M T W Th F 9. I.&L.R. Bldg. 10A. Professor McCONNELL.

This course is designed as a general survey of legislation and private programs to maintain fair wages, favorable working conditions, job security, and income during emergencies. The topics discussed, among others, will be minimum wages, health and safety legislation, employee benefit programs, pensions, and other forms of social insurance. Emphasis will be given to the philosophy of these programs, their historical development and general effectiveness as well as their impact upon industry and the economy.

INDUSTRIAL EDUCATION

See Education, page 32.

POST SESSION

August 18—August 29

I.&L.R. 334u. *CONFERENCE LEADERSHIP AND OTHER INSTRUCTIONAL METHODS*. (U,G) 2 hours credit. M T W Th F 8-12 and 1-3. I.&L.R. Bldg. 17. Instructor to be announced.

Study of the various methods of instruction applicable to adult groups, with special reference to workers and supervisors in industry. Content will include a review of educational objectives and principles of learning; demonstration and discussion of on-the-job training, group teaching, conferences, panels, symposiums,

role playing, and other methods; applications of these methods to specific situations. Special emphasis will be placed on group discussion leadership, and students will be expected to lead group discussions on current topics and problems.

For further information about this unit course, please write to Conference Headquarters, School of Industrial and Labor Relations, Cornell University, Ithaca, New York.

SPECIAL INSTITUTES

In addition to the regular Summer Session program, the School of Industrial and Labor Relations will conduct several institutes during the summer. These institutes are designed to help persons working in various areas of industry business, and education. A special announcement concerning these institutes may be obtained by writing to Conference Headquarters, New York State School of Industrial and Labor Relations, Cornell University, Ithaca, New York.

LANGUAGES AND LITERATURE

CLASSICS

Class. 1. *CLASSIC MYTHS*. (U,G) 2 hours credit. No knowledge of Greek or Latin is required. M T W Th F 12. Goldwin Smith 120. Assistant Professor NORTH.

A study of the principal cycles of Greek mythology—for example, the myths of the Gods and the Trojan, Argive, and Theban cycles—and of their representation in art and literature. Lectures; readings; reports. Lectures will be illustrated with lantern slides.

Class. 2. *THE POETRY OF VIRGIL*. (U,G) 2 hours credit. M T W Th F 10. Goldwin Smith 124. Assistant Professor NORTH.

Readings, partly in Latin and partly in English, from the whole of Virgil's works. The material and the method of the course will be adapted to the needs and previous experience of the students.

Class. 3. *THESES AND INFORMAL WORK*. (G) Credit by arrangement; total credit for thesis may not exceed six hours. Assistant Professor NORTH.

FRENCH LITERATURE AND COMPOSITION

Rom.L. 317. *THE FRENCH NOVEL AND DRAMA OF THE FIRST PART OF THE NINETEENTH CENTURY*. (U,G) 2 hours credit. M T W Th F 11. Goldwin Smith 281. Associate Professor RIDEOUT.

The central theme of the course is Romanticism, its theory and achievement. Classroom discussions of texts, oral reports on outside reading, and occasional lectures. The course is conducted in French.

Frnch. 223. *ADVANCED COMPOSITION AND CONVERSATION*. (U,G) 2 hours credit. Prerequisite, a reasonable facility in oral and written French. M T W Th F 9. Goldwin Smith 281. Associate Professor RIDEOUT.

Translation into French; discussion of important points of syntax; theme writing; oral exercise. Conducted in French, the course is especially designed for teachers, prospective teachers, and others interested in developing fluency.

LANGUAGES

Professors J. M. COWAN, R. A. HALL JR., W. G. MOULTON; Associate Professors F. B. AGARD, G. H. FAIRBANKS, and C. F. HOCKETT; Assistant Professors C. C. HARRIS and J. F. WHITE.

The system of course numbering is the same for all languages offered by the Division. Courses 101 and 102 in a given language aim at bringing the student to a level of achievement sufficient to enable him to pass the Proficiency Examination and thus fulfill the language requirement for graduation. The courses are the equivalent of Courses 101 and 102 offered in the regular academic year.

Course 151 is designed to assist graduate students to prepare themselves for the reading examinations required by the Graduate School. This course is to be considered as a full-time program by the students, and the equivalent of six hours of undergraduate credit will be allowed. In actual practice those registered in 151 will participate in the oral drill as set up for 101, but they will be given special reading and outside assignments consonant with their needs and abilities. If fewer than eight students register for this course, the instruction given will be identical with that in 101.

All courses constitute a full academic program of six credit hours and consist of twenty hours of instruction each week at periods to be assigned. Registration for these courses will be closed when the capacity of the sections has been reached.

Frnc. 101. *FRENCH*. (U) 6 hours credit. Morrill. Professor HALL and assistants.

Frnc. 102. *FRENCH*. (U) 6 hours credit. Morrill. Prerequisite, French 101 or equivalent. Professor HALL and assistants.

Frnc. 151. *FRENCH*. (G) 6 hours credit. Morrill. For graduate students acquiring reading proficiency. Professor HALL and assistants.

Germ. 101. *GERMAN*. (U) 6 hours credit. Morrill. Professor MOULTON and assistants.

Germ. 102. *GERMAN*. (U) 6 hours credit. Morrill. Prerequisite, German 101 or equivalent. Professor MOULTON and assistants.

Germ. 151. *GERMAN*. (G) 6 hours credit. Morrill. For graduate students acquiring reading proficiency. Professor MOULTON and assistants.

Span. 101. *SPANISH*. (U) 6 hours credit. Morrill. Professor AGARD and assistants.

Span. 102. *SPANISH*. (U) 6 hours credit. Morrill. Prerequisite, Spanish 101 or equivalent. Professor AGARD and assistants.

PHYSICAL SCIENCES AND MATHEMATICS

CHEMISTRY

*Chem. 105-106. *GENERAL CHEMISTRY*. (U) 6 hours credit. Lectures and recitations, M T W Th F 8-10, Baker 200; laboratory, M T W Th F 10-1, Baker 150. Assistant Professor SIENKO and assistants.

For those students who intend to take more chemistry, this course serves as a prerequisite to the more advanced courses in chemistry. Secondary school chem-

istry is not a prerequisite. The course may be elected by students who do not intend to take more chemistry.

Emphasis on the more important chemical principles and facts, on the scientific method, and on the relation of chemistry to the other fields of knowledge and to everyday life. Laboratory fee, \$10.

*Chem. 201. *INTRODUCTORY QUALITATIVE ANALYSIS* (short course) (U,G) 4 hours credit. Prerequisite, general chemistry. Lectures, M T W Th F 8, Baker 7; laboratory, three hours daily except Saturday between 9 and 1, Baker 50. Assistant Professor SCHERAGA and assistant.

A study of the properties and reactions of the common elements and acid radicals, and their detection in various solutions. Laboratory fee, \$15.

Chem. 205. *INTRODUCTORY QUALITATIVE ANALYSIS*. (U,G) 3 hours credit. Prerequisite, general chemistry. Chemistry 207 must be taken with 205. Lectures, M T W Th F 8. Recitations, T Th 9. Baker 7. Assistant Professor SCHERAGA.

A study of the application of the theories of general chemistry to the systematic separation and detection of the common elements and acid radicals.

*Chem. 207. *INTRODUCTORY QUALITATIVE LABORATORY*. (U,G) 3 hours credit. Prerequisite, general chemistry. Must be taken with Chemistry 205. Laboratory, M W F 9-1 and T Th 10-1. Baker 50. Assistant Professor SCHERAGA and assistant.

A study of the properties and reactions of the common elements and acid radicals, and their detection in various solutions. Laboratory fee, \$15.

*Chem. 215. *INTRODUCTORY QUANTITATIVE ANALYSIS*. (short course) (U,G) 4 hours credit. Prerequisite, Chemistry 201 or 205 and 207. Lectures, M T W Th F 8, Baker 177; laboratory, three hours daily except Saturday between 9 and 1, Baker 252. Assistant Professor COOKE and assistant.

A study of the fundamental principles of gravimetric and volumetric analysis, and the analysis of various substances by these methods. Laboratory fee, \$15.

Chem. 220. *INTRODUCTORY QUANTITATIVE ANALYSIS*. (U,G) 3 hours credit. Prerequisite, Chemistry 201 or 205 and 207. Chemistry 222 must be taken with 220. Lectures, M T W Th F 8. Recitations, T Th 9. Baker 177. Assistant Professor COOKE.

A study of the fundamental principles of gravimetric and volumetric analysis with practice in stoichiometry.

*Chem. 222. *INTRODUCTORY QUANTITATIVE LABORATORY*. (U,G) 3 hours credit. Prerequisite, Chemistry 201 or 205 and 207. Must be taken with Chemistry 220. Laboratory, M W F 9-1 and T Th 10-1. Baker 252. Assistant Professor COOKE and assistant.

Laboratory practice in the preparation and standardization of various volumetric solutions and the analysis of a variety of substances by volumetric and gravimetric methods. Laboratory fee, \$15.

Chem. 303. *ELEMENTARY ORGANIC CHEMISTRY*. (U,G) 4 hours credit. Prerequisite, general chemistry. Qualitative analysis is desirable but not required. Chemistry 305 must be taken with Chemistry 303. Lectures, M T W Th F 8-10. Baker 207. Assistant Professor DETAR.

A study of aliphatic and aromatic organic compounds, their occurrence, relations, and uses.

*Chem. 305. *ELEMENTARY ORGANIC LABORATORY*. (U,G) 2 hours credit. Prerequisite, general chemistry; qualitative analysis is desirable but not required. Must be taken with Chemistry 303. Laboratory, M T W Th F 10-12:30. Baker 250. Assistant Professor DeTar and assistant.

Laboratory experiments on the preparation and reactions of typical organic compounds. Laboratory fee, \$15.

*Chem. 306. *ORGANIC LABORATORY*. (U,G) 2 hours credit. Prerequisite, Chemistry 303 and 305. Laboratory, M T W Th F 10-12:30. Baker 250. Assistant Professor DeTar and assistant.

A continuation of Chemistry 305. Laboratory fee, \$15.

Chem. 307. *INTRODUCTORY ORGANIC CHEMISTRY*. (U,G) 3 hours credit. Prerequisite, general chemistry; qualitative analysis is desirable but not required. Lectures and written reviews, M T W Th F 8, and also at 9 during the first three weeks. Baker 207. Assistant Professor DeTar.

A study of the more important compounds of carbon, their occurrence, methods of preparation, relations, and uses. The work covered is equivalent only to the first half of the year course; students who wish a complete course should register for Chemistry 303 and 305.

*Chem. 311. *INTRODUCTORY ORGANIC LABORATORY*. (U,G) 3 hours credit. Prerequisite or parallel course, Chemistry 307. Laboratory experiments and oral reviews, M T W Th F 10-12:30. Baker 250. Assistant Professor DeTar and assistant.

The student prepares typical compounds of carbon and familiarizes himself with their properties, reactions, and relations. Laboratory fee, \$20.

GEOLOGY

*Geol. 101-102. *GENERAL GEOLOGY*. (U) 6 hours credit. Lectures, M T W Th F 9-11; laboratory, M T W Th F 2-4:30. Associate Professor Burfoot and assistant.

The course comprises an introduction to the various branches of geologic science: mineralogic, lithologic, physiographic, structural, glacial, historic, and economic. The purpose of the course is to provide an adequate base for those who will major in geology and a comprehensive survey of earth science for the general student. Ten of the laboratory periods will be spent in the field to interpret the local geology. Laboratory fee, \$3; excursion fee to be announced at first class session, probably about \$6.

Geol. 120. *GEOLOGIC FIELD EXCURSIONS IN CENTRAL NEW YORK*. (U,G) 1 hour credit. Monday and Wednesday afternoons 2-4:30 for five weeks and two Saturdays all day. Associate Professor Burfoot and assistant.

The geologic and topographic features of the Finger Lakes region will be observed, discussed, and analyzed on excursions to outstanding areas. Excursion fee to be announced at the first session of the class.

Geol. 901u. *SUMMER FIELD SCHOOL IN GEOLOGY*. (U,G) 6 hours credit. Professor Nevin. June 9-July 19.

Registration limited to men. For full information write to the Department of Geology and Geography, McGraw Hall.

MATHEMATICS

Math. 162. *ANALYTIC GEOMETRY AND CALCULUS*. (U) 3 hours credit. Prerequisite, Mathematics 161 or the equivalent. M T W Th F S 10. White 101. Mr. BRACE.

Differentiation of general algebraic and transcendental functions and applications. Polar coordinates. Integration in terms of elementary functions; applications. Text: Holmes, *Calculus and Analytic Geometry*, Chapter VI to X.

Math. 163. *ANALYTIC GEOMETRY AND CALCULUS* (U) 3 hours credit. Prerequisite, Mathematics 162. M T W Th F S 11. White 203. Professor HURWITZ.

Infinite series, solid analytic geometry, partial derivatives, multiple integrals. Text: Holmes, *Calculus and Analytic Geometry*, Chapters XI-XV.

Math. 201. *DIFFERENTIAL EQUATIONS*. (U,G) 3 hours credit. Prerequisite, Mathematics 163 or the equivalent. M T W Th F S 11. White 101. Professor HYERS.

A standard beginning course in ordinary differential equations. Text: Golomb and Shanks, *Differential Equations*.

Math. 221. *MATHEMATICS FOR SECONDARY SCHOOL TEACHERS*. (U,G) 3 hours credit. M T W Th F S 9. White 101. Professor HURWITZ.

This course will treat selected topics in the mathematics taught in the secondary schools with a view to contributing to the enrichment of such teaching and giving a clearer understanding of the concepts and processes involved.

Math. 341. *ELEMENTARY THEORY OF NUMBERS*. (U,G) 3 hours credit. M T W Th F S 11. White 211. Professor HYERS.

The elementary theory of real rational integers. Divisibility; primality; congruences; primitive roots; Diophantine problems. Text: Uspensky and Heaslet, *Theory of Numbers*.

PHYSICS

*Phys. 103. *INTRODUCTORY EXPERIMENTAL PHYSICS*. (U,G) 3 hours credit. Demonstration lectures, M T W 8, Rockefeller A; recitations, M T W 9, Rockefeller 103. Three laboratory periods, Th F 2-4 and one as arranged, Rockefeller 220. Assistant Professor MOORE.

Mechanics, heat and sound. Text: Howe's *Introduction to Physics*. Laboratory fee, \$5.

*Phys. 104. *INTRODUCTORY EXPERIMENTAL PHYSICS*. (U,G) 3 hours credit. This course must be accompanied by 103 or preceded by a study of mechanics in either high school or college physics. Demonstration lectures, Th F S 8, Rockefeller A; recitations, Th F S 9, Rockefeller 105. Three laboratory periods, T W 2-4 and one as arranged, Rockefeller 220. Assistant Professor MOORE.

Electricity and light. Text: Howe's *Introduction to Physics*. Laboratory fee, \$5.

Phys. 115. *MECHANICS*. (U) 3 hours credit. A course for students of engineering with a deficiency in physics. M T W Th F 8 and M 2-4. Rockefeller 104. Associate Professor NEWHALL. Text: Sears-Zemansky, *College Physics*, Part I.

*Phys. 117. *ELECTRICITY AND MAGNETISM*. (U,G) 3 hours credit. Prerequisites, Physics 115 and calculus or simultaneous registration in Mathematics 163. Lectures, T Th 9, Rockefeller A; recitation, M T W Th F 8, Rockefeller 108; laboratory, T Th F 2-4:30, Rockefeller Annex. Professor TOMBOULIAN.

This course constitutes the third term of a four-term sequence in general physics required of students in engineering. The course includes fundamentals of electricity and magnetism of the sequence. Text: Sears, *Principles of Physics II: Electricity and Magnetism*. Laboratory fee, \$5.

Phys. 211. *INTRODUCTION TO CONTEMPORARY PHYSICS*. (U,G) 3 hours credit. M T W Th F S 11. Prerequisite, one year of college physics. Designed primarily for secondary school teachers and others whose main interest lies outside the field of physics. Rockefeller 103. Professor TOMBOULIAN and Associate Professor NEWHALL.

A survey course covering selected material from the field of atomic and nuclear physics presented from the experimental point of view. Elementary charged particles: mass spectroscopy; the electro-magnetic spectrum: the quantum theory of radiation and spectra: properties of nuclei; nuclear transformations: cosmic rays. Text: Oldenberg, *Introduction to Atomic Physics*.

Phys. 213. *ANALYTICAL MECHANICS*. (U,G) 3 hours credit. Prerequisites, two years of general physics or equivalent, differential and integral calculus. M T W Th F S 10 and S 11. Rockefeller 104. Associate Professor NEWHALL.

Newtonian mechanics of material particles, systems of particles, rigid bodies; planetary motion, hydrodynamics, elasticity and oscillations.

PSYCHOLOGY AND PHILOSOPHY

PSYCHOLOGY

Psych. 101. *INTRODUCTION TO PSYCHOLOGY*. (U) 2 hours credit. M T W Th F 10. Goldwin Smith C. Assistant Professor MONTGOMERY.

An introduction to the scientific study of behavior and experience, covering such topics as perception, motivation, emotion, learning, the higher thought processes, personality and individual differences. This course is prerequisite to further work in the Department.

Psych. 121. *PSYCHOLOGY OF PLAY*. (U) 2 hours credit. Prerequisite, at least 3 hours in psychology. M T W Th F 12. Morrill 340. Assistant Professor MONTGOMERY.

A critical survey of the theories and facts of play. Its therapeutic, educational, and recreational aspects are also treated.

Psych. 321. *PERSONALITY*. (U) 2 hours credit. Prerequisite, at least 3 hours in psychology. M T W Th F 9. Morrill 310. Assistant Professor HARVEY.

Theories of personality structure, function and development; methods of assessing personality; analysis of representative case histories.

Psych. 324. *SOCIAL PSYCHOLOGY*. (U) 2 hours credit. Prerequisite, at least 3 hours in psychology. M T W Th F 10. Morrill 340. Assistant Professor LAMBERT.

Problems of social behavior will be considered in the light of underlying psychological principles of motivation, perception, and learning. Among the topics to be discussed are socialization, language, attitudes, and group dynamics, as well as problems of aggression, prejudice, and leadership.

Psych. 351. *PSYCHOLOGICAL TESTS*. (U,G) 3 hours credit. With consent of the instructor, this course may be taken without observations for two hours credit. M T W Th F 9; observational hours to be arranged. Morrill 340. Professor FREEMAN.

Concepts of intelligence; individual and group tests of intelligence; principles underlying their construction and interpretation; use of tests in schools, in the armed services, and in other fields. Lectures, reading, and observations of individual testing.

Psych. 405. *ABNORMAL PSYCHOLOGY*. (U,G) 2 hours credit. Prerequisite, at least 6 hours in psychology. M T W Th F 8. Morrill 310. Assistant Professor HARVEY.

A study of the principal behavior disorders from the point of view of their implications for the understanding of normal people.

Psych. 413. *PSYCHOLOGY OF EXCEPTIONAL CHILDREN*. (G) (U by permission) 2 hours credit. M T W Th F 11. Morrill 340. Professor FREEMAN.

Designed to give a scientific understanding of children who deviate from the usual: the gifted, the feeble-minded, the delinquent, those having special abilities and disabilities, those having personality defects and those having sensory and physical handicaps. Lectures, reading, and case studies. Students who have not had or are not now taking a course in mental measurements may be admitted only with approval of the instructor.

MENTAL HYGIENE

M.Hyg. I. *MENTAL HYGIENE*. (U,G) 2 hours credit. M T W Th F 9 or M T W Th F 2. Goldwin Smith 218. Dr. DARLING and Miss MCCORMICK.

The human being considered as a psychobiologic unit in a complex environment. Discussion of (1) general personality structure, (2) maladjustment factors functioning at different ages from infancy through life, (3) the more common maladjustment symptoms of mental illness and their prevention.

PHILOSOPHY

Phil. 240. *SOCIAL PHILOSOPHY*. (U) 2 hours credit. M T W Th F 9. Goldwin Smith 221. Assistant Professor KAUFMANN.

The relation of society to the individual and his happiness is the central problem of social philosophy. In this course, a critical analysis of some of the outstanding conceptions of the past—from Plato and the Old Testament to Nietzsche and Freud—serves as the basis for an attempt to develop a modern conception of man, society, and happiness.

Phil. 302. *HISTORY OF MODERN PHILOSOPHY*. (U,G) 2 hours credit. Prerequisite, junior standing or consent of the instructor. M T W Th F 11. Goldwin Smith 221. Assistant Professor KAUFMANN.

Major continental and British philosophers from 1600 to 1900 including Descartes, Hume, Kant, Mill, Nietzsche. Special attention will be given to their interrelations.

Phil. 039. *INFORMAL STUDY*. (G) Credit and hours to be arranged. Open to graduate students with the consent of the instructor. Assistant Professor KAUFMANN.

SOCIAL SCIENCES

ECONOMICS

Econ. 101. *ELEMENTS OF ECONOMICS*. (U,G) 4 hours credit. M T W Th F 10-12. Goldwin Smith 256. Mr. GOLDBERG.

A general introductory survey of the economic system, with special reference to the function of price. Unless otherwise indicated, this course or its equivalent is prerequisite to all other courses in economics.

Econ. 203. *MONEY AND BANKING*. (U,G) 2 hours credit. Prerequisite, an elementary course in economics. M T W Th F 9. Goldwin Smith 242. Dr. SIEGELMAN.

Functioning of the monetary and banking system of the United States. Treasury and Federal Reserve policies and problems.

Econ. 305. *THE STOCK MARKET*. (U,G) 2 hours credit. No prerequisite. M T W Th F 10. Goldwin Smith 242. Dr. SIEGELMAN.

A study of the nature and functions of the national security exchanges in the American economy: SEC regulations of the national exchanges and such technical topics as short selling, regulation of margin buying, floor trading, work of the specialists. Investment banking and investment analysis are included.

Econ. 607. *PROBLEMS OF THE AMERICAN ECONOMY*. (U,G) 2 hours credit. Prerequisite, an elementary course in economics. M T W Th F 10. Goldwin Smith 264. Professor MONTGOMERY.

A survey of some of the more important economic problems and characteristics of contemporary America and of proposed or operative public policies related to them. Among the topics covered: the institutional characteristics of the American economy, the American ideological heritage, the problem of full employment and economic stability, problems arising out of the defense effort and wage and price stabilization, international economic relations, current labor problems, and the role of government in economic life.

Econ. 911. *DISSENTING ECONOMIC DOCTRINES AND COMPARATIVE ECONOMIC SYSTEMS*. (U,G) 2 hours credit. Prerequisite, an elementary course in economics. M T W Th F 11. Goldwin Smith 264. Professor MONTGOMERY.

A study of unorthodox or dissenting economic doctrines in contrast to classical and neoclassical economic thought; of the literature of social protest, of various types of economic organization that have been proposed or attempted, and of the problems of pricing and allocation of resources in collectivist and capitalistic economies.

GOVERNMENT

Govt. 218. *AMERICAN POLITICAL PARTIES*. (U,G) 2 hours credit. M T W Th F 9. Boardman 322. Associate Professor ROSSITER.

History, organization, and functions of political parties in the United States.

Govt. 235. *AMERICAN POLITICAL THEORY, 1607-1860*. (U,G) 2 hours credit. M T W Th F 11. Boardman 321. Associate Professor ROSSITER.

The evolution of American ideas in the formative period of the nation.

HISTORY

Hist. 116. *EUROPE FROM WESTPHALIA TO THE FRENCH REVOLUTION*. (U,G) 2 hours credit. M T W Th F 9. Boardman 122. Associate Professor LACH.

A general period course dealing with the political, social, and economic history of Europe.

Hist. 148. *RUSSIA AND EASTERN EUROPE IN THE NINETEENTH AND TWENTIETH CENTURIES.* (U,G) 2 hours credit. M T W Th F 10. Boardman 321. Assistant Professor SPALDING.

The people of Poland, Hungary, Roumania and the Balkans in their relations to Russian history since the end of the eighteenth century.

Hist. 164. *HISTORY OF THE MODERN FAR EAST.* (U,G) 2 hours credit. M T W Th F 8. Boardman 122. Assistant Professor SPALDING.

A quick survey of the Far East from the opening of China and Japan to the present, with special attention to the twentieth century and to developments in Southeast Asia, Korea, and the Russian Far East.

Hist. 453. *THE AGE OF THE ENLIGHTENMENT.* (U,G) 2 hours credit. M T W Th F 11. Boardman 122. Associate Professor LACH.

European problems in the eighteenth century with special attention to philosophical and cultural development.

Hist. 719. *SOCIAL REFORM IN THE UNITED STATES.* (U,G) 2 hours credit. M T W Th F 9. Boardman 321. Professor DESTLER.

Selected phases of the history of social reform in the United States from the American Revolution to the twentieth century, with emphasis upon intellectual and socio-economic aspects.

Hist. 727. *THE "GILDED AGE," 1865-1901.* (U,G) 2 hours credit. M T W Th F 11. Boardman 322. Professor DESTLER.

An analysis of the reorganization of American life wrought by sectional, urban-industrial, and ideological forces, and of the rising multi-level democratic opposition to "Bourbonism."

Hist. 735. *NEW YORK STATE IN THE NINETEENTH AND TWENTIETH CENTURIES.* (U,G) 2 hours credit, undergraduate students; 2 or 4 hours credit, graduate students. M T W Th F 8. Regional History, Boardman. Mrs. Fox.

Economic, social, and political developments will be traced in terms of New York's position in the national scene. The seminar will be held in the Collection of Regional History, a manuscript division with a large variety of source materials for nineteenth-century New York. These will be drawn upon for lectures, discussions, and the writing of term papers. The techniques of using primary materials will receive particular emphasis.

SOCIOLOGY, ANTHROPOLOGY, AND RURAL SOCIOLOGY

Soc. 101. *INTRODUCTION TO THE STUDY OF SOCIETY.* (U,G) 2 hours credit. M T W Th F 11. Morrill 240. Mr. BLAU.

An introduction to the study of societies as interrelated systems; selected major problems of contemporary American society as seen in the context of our own social systems; social factors in personality formation.

R.Soc. 126. *SOCIAL SERVICES TO INDIVIDUALS.* (U,G) 2 hours credit. M T W Th F 9. Warren 101. Associate Professor TAIETZ.

This course considers the field of social work and its services designed to meet a wide range of human needs growing out of social, economic, and emotional maladjustments.

Attitudes and behavior commonly encountered in helping people who have personal and social problems are explored. A survey of counseling methods, with

particular emphasis on the technique of interviewing. Discussion of case material provided by the instructor and from the student's experience.

R.Soc. 132. *RURAL LEADERSHIP*. (U,G) 2 hours credit. M T W Th F 10. Warren 101. Assistant Professor WHITE.

A study of professional and volunteer leadership in rural institutional programs. About one-third of this course will be devoted to analyses of the objectives and motivations of institutions and their employees with respect to the relationship of these forces to leadership functions; parallel analyses of the objectives and motivations of volunteer people in leadership roles will be made.

The remainder of the course will be devoted to designing leadership activities which are maximally effective. Major emphasis will be given to volunteer leadership. Where possible, the course will be adjusted to take into account the immediate concerns of class members.

R.Soc. 136. *HUMAN RELATIONS FACTORS IN PROGRAM DEVELOPMENT*. (U,G) 2 hours credit. M T W Th F 8. Warren 101. Assistant Professor WHITE.

An analysis of the impact of human relations factors on the development and operation of the institutional programs, particularly agricultural and rural programs.

About one-third of this course will be devoted to the establishment of a theoretical and philosophical basis for program analysis. The remainder of the course will be devoted to application of identified principles to specific situations and to examination of specific situations for the purpose of identifying basic operating principles. The particular problems to be emphasized will be selected insofar as possible from those confronting members of the class.

R.Soc. 137. *ADJUSTMENT IN THE MIDDLE AND LATER YEARS*. (U,G). 2 hours credit. M T W Th F 10. Van Rensselaer 121. Professor ROCKWOOD and Associate Professor TAIETZ.

This course considers the adjustment in the middle and later years as a process of biological, psychological, and social change. Emphasis will be placed upon changes in role and status, marital and family relationships, living arrangements, and employment. The provisions, public and private, which have been developed to meet the aged person's economic, social, psychological, medical, recreational, educational, and housing needs will be described and evaluated.

Soc. 320. *POLITICAL SOCIOLOGY*. (U,G) 2 hours credit. M T W Th F 12. Morrill 240. Mr. BLAU.

This course deals with the study of political institutions as sociological phenomena. It will include the discussion of the relationship between democratic values and socio-political realities in America; the examination of the various forms and instruments of political power, such as bureaucratic organizations and political machines, and the analysis of voting behavior and political apathy.

R.Soc. 607. *PEOPLES OF SOUTHEAST ASIA*. (U,G) 2 hours credit. M T W Th F 8. Morrill 240. Professor COLE.

A study of representative cultures in Southeast Asia (Burma, Indochina, Indonesia, Malaya, the Philippines, and Thailand). Topics include prehistory, distribution of racial and cultural types, and the problems of modernization now faced by the peoples of the area.

R.Soc. 611. *CULTURAL ANTHROPOLOGY*. (U,G) 2 hours credit. M T W Th F 9. Morrill 240. Professor COLE.

Problems in the comparative study of cultures; the component parts of culture

and their interrelations; analysis of processes involved in the impact of cultures on each other and in change.

Soc. 020. *INFORMAL STUDY*. (U,G) Credit and hours to be arranged. Open to upperclass majors and graduate students in sociology and anthropology and rural sociology. Members of the staff of the departments.

SOCIAL PSYCHOLOGY. See Psych. 324, p. 62.

METHODS OF RESEARCH. See C.D.&F.R. 405, p. 47.

FIELD SEMINAR IN UNDERSTANDING THE COMMUNITY

R.Soc. 250u. *FIELD SEMINAR IN UNDERSTANDING THE COMMUNITY*. Full-time, July 31-August 9, 1952. 2 hours credit. Mann 128. Associate Professor REEDER, Chairman of Seminar.

There are many people who because of their work or interests need an insightful understanding of the communities in which they work or live or who need to help others to achieve such an understanding. For example: schoolteachers who are concerned with life-centered education or with utilizing community resources in their teaching; school administrators, supervisors, and teacher trainers who are preparing teachers to go into communities; county agents, home demonstration agents, 4-H agents, scout executives, ministers, and others who are developing programs in the community and who need to relate their programs to the total community and its needs. This field seminar is especially designed for such people.

Most of the time will be spent in a sample community learning by doing. Seminar members will have the opportunities to gain significant information, understandings, and insights, at the same time learning to use the tools and methods by which these may be acquired. An appropriate proportion of the time will be devoted to planning and to the discussion of the methods, the findings, the basic principles involved, and the uses which can be made of them.

The meeting place will be in a community near Ithaca. The tuition will be \$30.

Because of the nature of this workshop, the number of participants will necessarily be limited. It is suggested that whenever possible teams of two or more persons attend. Write for further details, before June 15, to Professor W. W. Reeder, Department of Rural Sociology, Cornell University, Ithaca, New York.

Officers

Deane Waldo Malott, A.B., M.B.A., LL.D., President of the University.
Carleton Chase Murdock, Ph.D., Dean of the University Faculty.
Charles Williams Jones, Ph.D., Dean of the Graduate School.
Frederick Harry Stutz, Ph.D., Director of the Summer Session.

Faculty

Meyer Howard Abrams, Ph.D., Associate Professor of English.
Eleanore Adam, M.A., Assistant Professor of Textiles and Clothing.
Robert Martin Adams, Ph.D., Assistant Professor of English.
F. B. Agard, Ph.D., Associate Professor of Modern Languages.
J. Stanley Ahmann, Ph.D., Assistant Professor of Rural Education.
Harry Darkes Albright, Ph.D., Associate Professor of Speech and Drama.
Arthur A. Allen, Ph.D., Professor of Ornithology.
Elsa G. Allen, Ph.D., Instructor in Ornithology.
Lucile Allen, Ed.D., Dean of Women.
Walfred A. Anderson, Ph.D., Professor of Rural Sociology.
Howard G. Andrus, Ph.D., Assistant Professor of Rural Education and
Director of the Educational Placement Bureau.
Carroll C. Arnold, Ph.D., Assistant Professor of Speech and Drama.
William Weaver Austin, A.M., Associate Professor of Music.
Richard W. Bardwell, Ph.D., Director of Madison Vocational and Adult
Education, Madison, Wisconsin.
C. Kenneth Beach, Ph.D., Professor of Industrial and Labor Relations.
John Clinton Beaven, M.A., Instructor in Music.
Landis S. Bennett, Ph.D., Visual Aids Specialist, State College, Raleigh,
N. C.
Sara Elizabeth Blackwell, M.S., Assistant Professor of Home Economics
Education.
Peter Michael Blau, A.B., Instructor in Sociology.
Maurice C. Bond, Ph.D., Professor of Agricultural Economics.
Laurence C. Boylan, Ph.D., Director of Guidance, Gloversville Schools,
Gloversville, New York.
J. W. Brace, M.A., Instructor in Mathematics.
Aubrey Swift Bradshaw, M.S., Professor of Biology, Transylvania Col-
lege, Lexington, Kentucky.
Harold Gabriel Buchbinder, B.S. in C.E., Instructor in Civil Engineering.
James Dabney Burfoot, Jr., Ph.D., Associate Professor of Geology.

- Joseph D. Burroughs, M.S. Ed., Counselor, State Consultation Service, Fishersville, Virginia.
- Gladys Butt, M.A., Associate Professor of Textiles and Clothing.
- John David Melvin Cameron, B.M.E., Instructor in Mechanics.
- Daniel G. Clark, Ph.D., Professor of Botany.
- Robert T. Clausen, Ph.D., Professor of Botany.
- Harold Clough, Instructor in Agricultural Engineering.
- Burr Coe, M.Ed., Vice-Principal, Edison Technical and Industrial High School, Rochester, New York.
- Fay Cooper Cole, Ph.D., Professor Emeritus, Sociology and Anthropology, University of Chicago.
- LaMont C. Cole, Ph.D., Associate Professor of Zoology.
- Ruth Boies Comstock, M.A., Associate Professor of Housing and Design.
- W. Donald Cooke, Ph.D., Assistant Professor of Chemistry.
- J M. Cowan, Ph.D., Professor of Modern Languages and Director of Division of Modern Languages.
- Robert H. Dalton, Ph.D., Professor of Child Development and Family Relationships.
- Norman Daly, M.A., Associate Professor of Fine Arts.
- C. Douglas Darling, M.D., Professor of Clinical Medicine.
- Lawrence Bryce Darrah, Ph.D., Professor of Agricultural Economics.
- Chester McArthur Destler, Ph.D., Department of History, Connecticut College, New London, Connecticut.
- Delos F. DeTar, Ph.D., Assistant Professor of Chemistry.
- Edward Devereux, Ph.D., Associate Professor of Child Development and Family Relationships.
- Mabel Doremus, M.S., Assistant Professor of Food and Nutrition.
- David Dropkin, Ph.D., Associate Professor of Heat-Power Engineering.
- Alexander Drummond, M.A., L.H.D., Professor of Speech and Drama.
- Lola T. Dudgeon, M.S., Associate Professor of Food and Nutrition.
- Mildred Dunn, M.S., Assistant Professor of Food and Nutrition.
- Theodore Eckert, M.S., Assistant Professor of Science Education.
- Lloyd H. Elliott, Ed.D., Associate Professor of Secondary Education.
- Lynn A. Emerson, Ph.D., Professor of Industrial and Labor Relations.
- G. H. Fairbanks, Ph.D., Associate Professor of Modern Languages.
- David G. Flemming, B.A., Instructor in Speech and Drama.
- Edward Wilbur Foss, M.S.A., Professor of Agricultural Engineering.
- Grace Foster, M.S., Associate Professor of Food and Nutrition.
- Edith M. Fox, M.A., Curator, Cornell Collection of Regional History.
- Frank S. Freeman, Ed.D., Professor of Psychology and Education.
- Walter Hoyt French, Ph.D., Professor of English.
- Perry Webster Gilbert, Ph.D., Associate Professor of Zoology.
- Marvin David Glock, Ph.D., Professor of Educational Psychology.
- Kalman Goldberg, A.B., Instructor in Economics.

- Eva L. Gordon, Ph.D., Associate Professor of Rural Sociology.
Paul Gordon, M.B.A., Assistant Professor of Industrial and Labor Relations.
Harold E. Gray, Ph.D., Associate Professor of Agricultural Engineering.
Cedric H. Guise, M.F., Professor of Forestry.
Maurice Guss, M.S., Instructor in Bacteriology.
R. A. Hall, Ph.D., Professor of Modern Languages.
William J. Hamilton, Jr., Ph.D., Professor of Zoology.
Nicholas Hans, Ph.D., Reader in Comparative Education, Kings College, University of London, England.
C. Clelland Harris, Ph.D., Assistant Professor of Modern Languages.
Katherine Wyckoff Harris, M.A., Professor of Institution Management and Head of the Department.
C. F. Hockett, Ph.D., Associate Professor of Modern Languages.
Wayne Hodges, M.A., Professor of Industrial and Labor Relations.
Helen Hoefer, M.S., Associate Professor of Home Economics Education.
Marguerite E. Horn, M.S., Assistant Professor of Food and Nutrition, Pennsylvania State College, State College, Pennsylvania.
Edwin Raymond Hoskins, Ph.D., Professor of Rural Education.
W. A. Hurwitz, Ph.D., Professor of Mathematics.
D. H. Hyers, Ph.D., Professor of Mathematics, University of Southern California, Los Angeles, California.
James J. Jehring, M.A., Assistant Professor of Industrial and Labor Relations.
Vernon Jensen, Ph.D., Professor of Industrial and Labor Relations.
Walter A. Kaufmann, Ph.D., Assistant Professor of Philosophy and Bicentennial Preceptor, Princeton University.
Chase Delmar Kearn, Ph.D., Associate Professor of Agricultural Economics.
William Rea Keast, Ph.D., Associate Professor of English.
Loretta Klee, M.A., Director of Social Studies, Ithaca Public Schools, Ithaca, New York.
Dorothy M. Klitzke, Ph.D., Assistant Professor of Economics of the Household and Household Management.
Katherine A. Knapp, M.S.Ed., Elementary Teacher, Ithaca Public Schools, Ithaca, New York.
William R. Kunsela, Ph.D., Assistant Professor of Rural Education.
Donald Lach, Ph.D., Associate Professor of History, University of Chicago, Chicago, Illinois.
Elwood Albert LaFortune, M.A., Director of Guidance, Ithaca Public Schools, Ithaca, New York.
William Lambert, Ph.D., Assistant Professor of Psychology.
Betty H. Landsberger, Ph.D., Assistant Professor of Child Development and Family Relationships.

- Chester C. Lang, Ph.D., Assistant State 4-H Club Leader for Ohio.
Margaret La Pray, M.A., Reading Consultant, Schools of Tompkins County, New York.
J. Paul Leagans, Ph.D., Professor of Extension Education.
Anita Lear, M.S., Assistant Professor of Textiles and Clothing.
Robert Edwin Lee, Ph.D., Assistant Professor of Ornamental Horticulture.
Karla Longree, Ph.D., Associate Professor of Food and Nutrition.
Ruby M. Loper, B.S., Associate Professor of Housing and Design.
John W. MacDonald, LL.B., Professor of Law, Secretary and Director of the New York State Law Revision Commission.
Duncan MacIntyre, Ph.D., Assistant Professor of Industrial and Labor Relations.
Philip J. McCarthy, Ph.D., Professor of Industrial and Labor Relations.
John McConnell, Ph.D., Professor of Industrial and Labor Relations.
Frances McCormick, B.A., Teaching Assistant.
Elsie McMurry, M.A., Associate Professor of Textiles and Clothing.
Frances Edward Mineka, Ph.D., Professor of English and Chairman of the Department of English.
Edward O. Moe, Ph.D., Associate Professor of Rural Sociology.
James Elmer Montgomery, Ph.D., Associate Professor of Housing and Design.
Kay C. Montgomery, Ph.D., Assistant Professor of Psychology.
Royal E. Montgomery, Ph.D., Professor of Economics.
Aimee N. Moore, M.A., Assistant Professor of Institution Management.
Clyde B. Moore, Ph.D., Professor of Education.
Frank Leslie Moore, Jr., Ph.D., Assistant Professor of Physics.
Helen E. Moser, M.S., Associate Professor of Home Economics Education.
William G. Moulton, Ph.D., Professor of Modern Languages.
Royse Peak Murphy, Ph.D., Professor of Genetics.
Sarah Neblett, M.A., Associate Professor of Housing and Design.
A. Gordon Nelson, Ph.D., Associate Professor of Education and Vocational Guidance.
Charles Merrick Nevin, Ph.D., Professor of Geology.
Herbert Frank Newhall, Ph.D., Associate Professor of Physics.
Louis V. Newkirk, Director, Division of Industrial Arts, Board of Education, Chicago, Illinois.
Helen North, Ph.D., Assistant Professor of Classics, Swarthmore College, Swarthmore, Pennsylvania.
Milacent Grimes Ocvirk, M.A., Director of English, Ithaca Public Schools, Ithaca, New York.
Edward Bellamy Partridge, Ph.D., Faculty Instructor in English.
Isabel Peard, Ph.D., Director of Student Deans and Head Residents.
Richard Magruder Phelan, M.M.E., Assistant Professor of Mechanical Engineering.

- Edward V. Pope, M.A., Associate Professor of Child Development and Family Relationships.
- Joseph Pullman Porter, M.S.A., Associate Professor of Ornamental Horticulture.
- Alfred M. S. Pridham, Ph.D., Associate Professor of Ornamental Horticulture.
- Dorothy Proud, M.S., Associate Professor of Institution Management.
- Harold W. Ranney, M.A., Professor of Industrial Education, New York State Education Department.
- William W. Reeder, Ph.D., Associate Professor of Rural Sociology.
- Katherine Reeves, M.A., Associate Professor of Child Development and Family Relationships.
- Lincoln Reid, M.S., Associate Professor of Hydraulics.
- Blanchard Livingstone Rideout, Ph.D., Associate Professor of Romance Languages and Literatures.
- Lemo D. Rockwood, Ph.D., Professor of Child Development and Family Relationships.
- Mabel A. Rollins, Ph.D., Professor of Economics of the Household and Household Management.
- Clinton L. Rossiter, Ph.D., Associate Professor of Government.
- Martin Wright Sampson, Jr., M.S., Associate Professor of Industrial and Engineering Administration.
- Harold A. Scheraga, Ph.D., Assistant Professor of Chemistry.
- L. H. Schultz, Ph.D., Assistant Professor of Animal Husbandry.
- John Armson Sessions, Ph.D., Instructor in English.
- Charles Edward Shain, Ph.D., Assistant Professor of English.
- Muriel Sharon, Director, Children's Theatre, Y.M.H.A., New York City.
- Louis Siegelman, Ph.D., Faculty Instructor in Economics.
- Michell Joseph Sienko, Ph.D., Assistant Professor of Chemistry.
- Norman C. Small, B.A., Instructor in Engineering Materials.
- Marjorie C. Smith, A.B., Principal, West Hill School, Ithaca, New York.
- William Arthur Smith, Ph.D., Associate Professor of Rural Education.
- Barbara Snowman, B.S., Instructor in Economics of the Household and Household Management.
- William Spalding, Ph.D., Assistant Professor, Department of History, Vassar College, Poughkeepsie, N. Y.
- Jack L. Squier, M.F.A., Instructor in Fine Arts.
- Walter Hutchinson Stainton, Ph.D., Associate Professor of Speech and Drama.
- Betty Steele, Ph.D., Assistant Professor of Food and Nutrition.
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